

# Wireless Relay Module

**Model No.: FW-RM**

**Date: 2017-06-16**

**Report Prepared By:**

Christopher Locke

**EMC Test Report**

|                                       |                                                                              |
|---------------------------------------|------------------------------------------------------------------------------|
| <b>Report Number</b>                  | 20294-1                                                                      |
| <b>EUT Nomenclature</b>               | Wireless Relay Module                                                        |
| <b>Sample Identification</b>          | Model No. : FW-RM                                                            |
|                                       | Sl. No. : MEL-159                                                            |
|                                       | Software Version : 5.83                                                      |
|                                       | Hardware Version : Rev 2                                                     |
| <b>Number of Samples</b>              | 1                                                                            |
| <b>Date of receipt of Sample</b>      | 2016-06-27                                                                   |
| <b>Condition of Sample on receipt</b> | Good                                                                         |
| <b>Client name</b>                    | Honeywell International Inc.                                                 |
| <b>Client Address</b>                 | System Sensor,<br>3825, Ohio Ave,<br>St. Charles , IL, USA - 60174           |
| <b>Testing Laboratory</b>             | Honeywell Home & Building Technologies RF & EMC HWVA                         |
| <b>Address</b>                        | 2 Corporate Center Dr.<br>Suite 100 PO Box 9040<br>Melville, NY 11747<br>USA |
| <b>Test Dates</b>                     | 2016-08-04 to 2017-04-24                                                     |
| <b>Applicable Standard</b>            | FCC Part 15 Subpart C                                                        |
| <b>Test Results</b>                   | PASS                                                                         |

|                                                                                                                                                                   |                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Prepared By:<br>Name: Christopher Locke<br><br>Signature: <br>Date: 2017-06-16 | Reviewed By:<br>Name: Michael Antola<br><br>Signature: <br>Date: 2017-06-16 |
| Authorized By:<br>Name: Ted Ramos<br><br>Signature: <br>Date: 2017-06-16       |                                                                                                                                                                 |

| TEST SUMMARY |                                    |                                             |             |      |      |    |
|--------------|------------------------------------|---------------------------------------------|-------------|------|------|----|
| #            | Name                               | Specification                               | Test Method | Pass | Fail | NA |
| FHSS         |                                    |                                             |             |      |      |    |
| 1            | 20dB Bandwidth                     | FCC Part 15.247:2010                        | DA 00-705   | √    |      |    |
| 2            | Maximum Peak Output Power          | FCC Part 15.247:2010                        | DA 00-705   | √    |      |    |
| 3            | Carrier Frequency Separation       | FCC Part 15.247:2010                        | DA 00-705   | √    |      |    |
| 4            | Number of Hopping Frequencies      | FCC Part 15.247:2010                        | DA 00-705   | √    |      |    |
| 5            | Band-edge Compliance               | FCC Part 15.247:2010                        | DA 00-705   | √    |      |    |
| 6            | Time of Occupancy (Dwell Time)     | FCC Part 15.247:2010                        | DA 00-705   | √    |      |    |
| 7            | Spurious RF Conducted Emissions    | FCC Part 15.247:2010                        | DA 00-705   | √    |      |    |
| 8            | Spurious Radiated Emissions        | FCC Part 15.247 and 15.209                  | DA 00-705   | √    |      |    |
| 9            | Effective Isotropic Radiated Power | FCC Part 15.247 : 2010<br>and 15.209 : 2010 | KDB 412172  | √    |      |    |
| DTS          |                                    |                                             |             |      |      |    |
| 1            | DTS 6dB Bandwidth                  | FCC Part 15.247                             | KDB 558074  | √    |      |    |
| 2            | Maximum Peak Output Power          | FCC Part 15.247                             | KDB 558074  | √    |      |    |
| 3            | Maximum Power Spectral Density     | FCC Part 15.247                             | KDB 558074  | √    |      |    |
| 4            | Band-edge Conducted Emissions      | FCC Part 15.247                             | KDB 558074  | √    |      |    |
| 5            | Radiated Spurious Emissions        | FCC Part 15.247 and 15.209                  | KDB 558074  | √    |      |    |
| 6            | Effective Isotropic Radiated Power | FCC Part 15.247 : 2010<br>and 15.209 : 2010 | KDB 412172  | √    |      |    |

| MEASUREMENT UNCERTAINTY                                                                                                                   |                                   |            |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|------------|
| Where relevant, the following measurement uncertainty levels has been estimated for tests performed on the EUT as specified in CISPR 16-4 |                                   |            |
| The Expanded measurement uncertainty (K=2) is provided below                                                                              |                                   |            |
| #                                                                                                                                         | Name                              | Value      |
| 1                                                                                                                                         | 20dB and 6dB bandwidth            | ± 0.22 dB  |
| 2                                                                                                                                         | Maximum Peak Output Power         | ± 0.22 dB  |
| 3                                                                                                                                         | Maximum Power Spectral Density    | ± 0.22 dB  |
| 4                                                                                                                                         | Band-edge Emissions               | ± 0.22 dB  |
| 5                                                                                                                                         | Spurious RF Conducted Emissions   | ± 0.22 dB  |
| 6                                                                                                                                         | Radiated Spurious Emissions <1GHz | ± 10.92 dB |
| 7                                                                                                                                         | Radiated Spurious Emissions >1GHz | ± 8.53 dB  |

# 1 PRODUCT DETAILS

## PRODUCT OPERATION AND INTENDED USE

The wireless relay module is powered by four CR123A batteries. It is intended to use with wireless gateway /Fire Alarm Panel. The module has LED indication, controlled by the panel to indicate the status.

## RATINGS AND SYSTEM DETAILS

|                                   |                             |                |
|-----------------------------------|-----------------------------|----------------|
| <b>Operating Frequency</b>        | 902MHz to 928MHz            |                |
| <b>Number of Channels</b>         | DTS                         | :6             |
|                                   | FHSS                        | :55            |
| <b>Channel Bandwidth (20 dB)</b>  | DTS                         | :1MHz          |
|                                   | FHSS                        | :320kHz        |
| <b>Transmitted Power</b>          | DTS                         | :12dBm         |
|                                   | FHSS                        | :17dBm         |
| <b>Modulation Type</b>            | FSK                         |                |
| <b>Data Rate</b>                  | DTS                         | :300Kbps       |
|                                   | FHSS                        | :150Kbps       |
| <b>Antenna Type</b>               | Inverter F Patch Antenna    |                |
| <b>No. of Antenna</b>             | 3                           |                |
| <b>Antenna Gain</b>               | ANT 1                       | :0.65dBi       |
|                                   | ANT 2                       | :2dBi          |
|                                   | ANT3                        | :1.3dBi        |
| <b>Supply Voltage and Current</b> | 3.3V, 21.5mA                |                |
| <b>Dimensions (L x B x H)</b>     | 4.263mm x 4.171mm x 1.465mm |                |
| <b>Environmental Conditions</b>   | Operating Temperature       | :0°C to 49°C   |
|                                   | Storage Temperature         | :-20°C to 60°C |
|                                   | Humidity                    | :10% to 93%    |

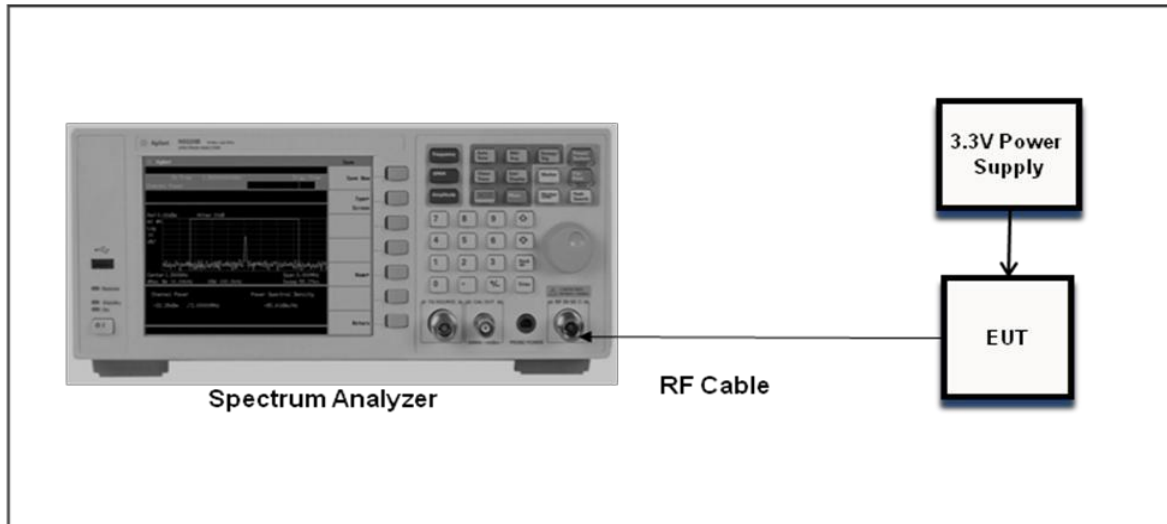
| TEST CONFIGURATION |                                                                                                                                                                                                                                                                           |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Config #           | Description                                                                                                                                                                                                                                                               |
| Conducted Test     | EUT is Powered by external 3.3V power supply. EUT Debug port (UART) is connected to Laptop through USB to UART converter cable. EUT is configured to the respective operating mode through HyperTerminal. Test is performed at Antenna 2 as this is the high gain antenna |
| Radiated Test      | EUT is Powered from Battery. EUT Debug port (UART) is connected to Laptop through USB to UART converter cable. EUT is configured to the respective operating mode through HyperTerminal. Test is performed at all 3 antennas                                              |

| OPERATING MODES |                                                                                                                                                                                                          |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mode #          | Description                                                                                                                                                                                              |
| DTS             | Following DTS channels have been used for Conducted (Continuous Transmission) and Radiated (Continuous Transmission) Tests<br>Channel 1 : 902.875MHz<br>Channel 3 : 914.325MHz<br>Channel 6 : 927.125MHz |
| FHSS            | Following FHSS channels have been used for Conducted (Continuous Transmission) and Radiated (Continuous Transmission) Tests<br>Channel 1 : 903.55MHz<br>Channel 28 : 916.00MHz<br>Channel 55 : 926.45MHz |

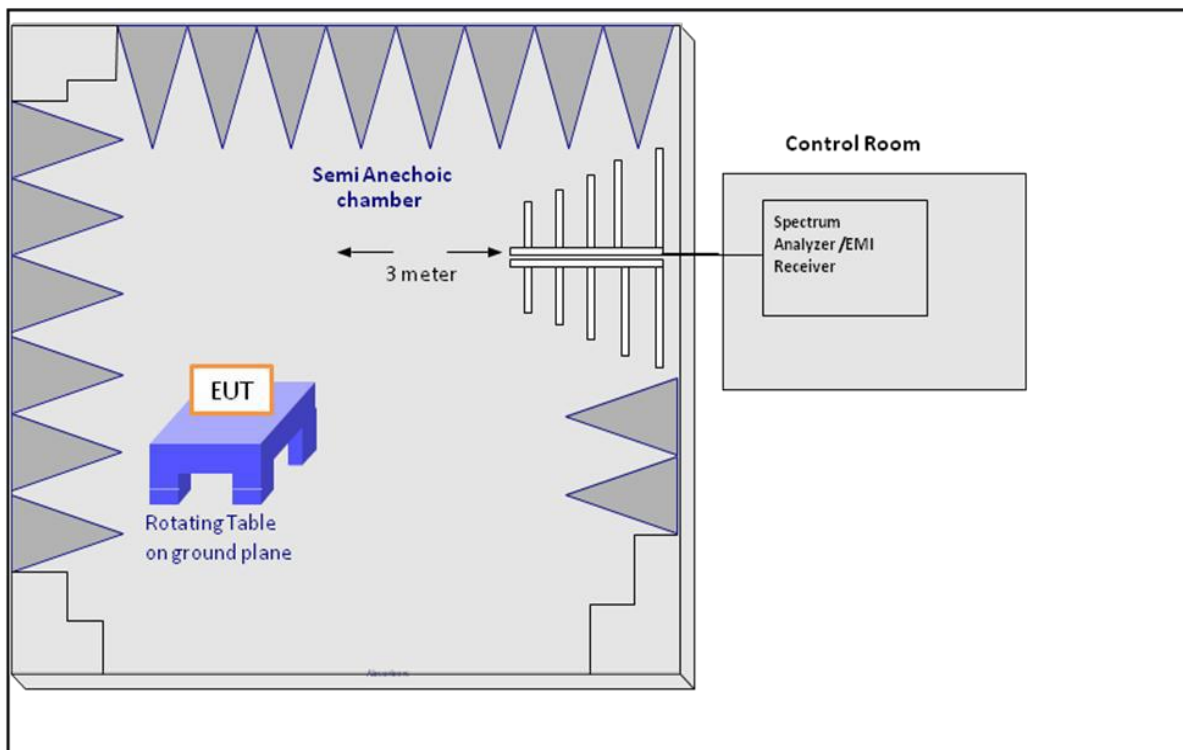
| INPUT AND OUTPUT CABLES |                                                                                            |           |              |                                 |                                                                      |
|-------------------------|--------------------------------------------------------------------------------------------|-----------|--------------|---------------------------------|----------------------------------------------------------------------|
| Port #                  | Name                                                                                       | Port Type | Cable Length | Cable type Shielded/ Unshielded | Comments                                                             |
|                         | Not Applicable                                                                             |           |              |                                 |                                                                      |
|                         |                                                                                            |           |              |                                 |                                                                      |
|                         |                                                                                            |           |              |                                 |                                                                      |
|                         |                                                                                            |           |              |                                 |                                                                      |
|                         |                                                                                            |           |              |                                 |                                                                      |
|                         |                                                                                            |           |              |                                 |                                                                      |
| *Note:                  | AC = AC Power Port<br>TP = Telecommunication Ports (e.g. Ethernet)<br>N/E = Non-Electrical |           |              | DC<br>DI/<br>DO<br>AI/          | = DC Power Port<br>= Digital Input/ Output<br>= Analog Input/ Output |

| SUPPORT EQUIPMENTS AND ACCESSORIES USED |                   |      |                      |                   |              |
|-----------------------------------------|-------------------|------|----------------------|-------------------|--------------|
| #                                       | Item Description  | Make | Model                | Part No. / SI. No | Cal Due Date |
| 1                                       | Laptop            | Dell | CORPMDTW10X64IMAGEV2 | 339YSC2           | NA           |
| 2                                       | USB to UART Cable | FTDI | NA                   | TTL-232R-3V3      | NA           |
| 3                                       | DC Power Supply   | HP   | E3611A               | KR83015320        | NA           |

## CONNECTION DIAGRAM AND SETUP DIAGRAM



Conducted RF Test Setup



Radiated Emission Test Setup

## 2 FHSS CHANNELS

### 2.1 20dB BANDWIDTH

|                       |                                           |                  |         |
|-----------------------|-------------------------------------------|------------------|---------|
| EUT Nomenclature      | Wireless Relay Module                     | Test Request No. | 20294-1 |
| Model No.             | FW-RM                                     | Serial No.       | MEL-159 |
| Test Start Date       | 2016-08-24                                | Temperature (°C) | 23.6°C  |
| Test End Date         | 2016-08-24                                | Humidity RH (%)  | 51.9%RH |
| Tested By             | Jose Badia/Arnoldo Garcia                 | Pressure (mbar)  | NR      |
| Input Voltage / Freq. | 3.3 Vdc                                   |                  |         |
| Operating Mode        | Refer Page 5 for Operating Mode Table     |                  |         |
| Test configuration    | Refer Page 5 for Test Configuration Table |                  |         |
| Deviation from Std.   | NA                                        |                  |         |
| Applicable standard   | FCC Part 15.247:2010                      |                  |         |
| Test Method           | DA 00-705                                 |                  |         |
| Comment               | NA                                        |                  |         |

#### TEST DETAILS

|        |                                   |                                               |
|--------|-----------------------------------|-----------------------------------------------|
| Method | Radiated <input type="checkbox"/> | Conducted <input checked="" type="checkbox"/> |
|--------|-----------------------------------|-----------------------------------------------|

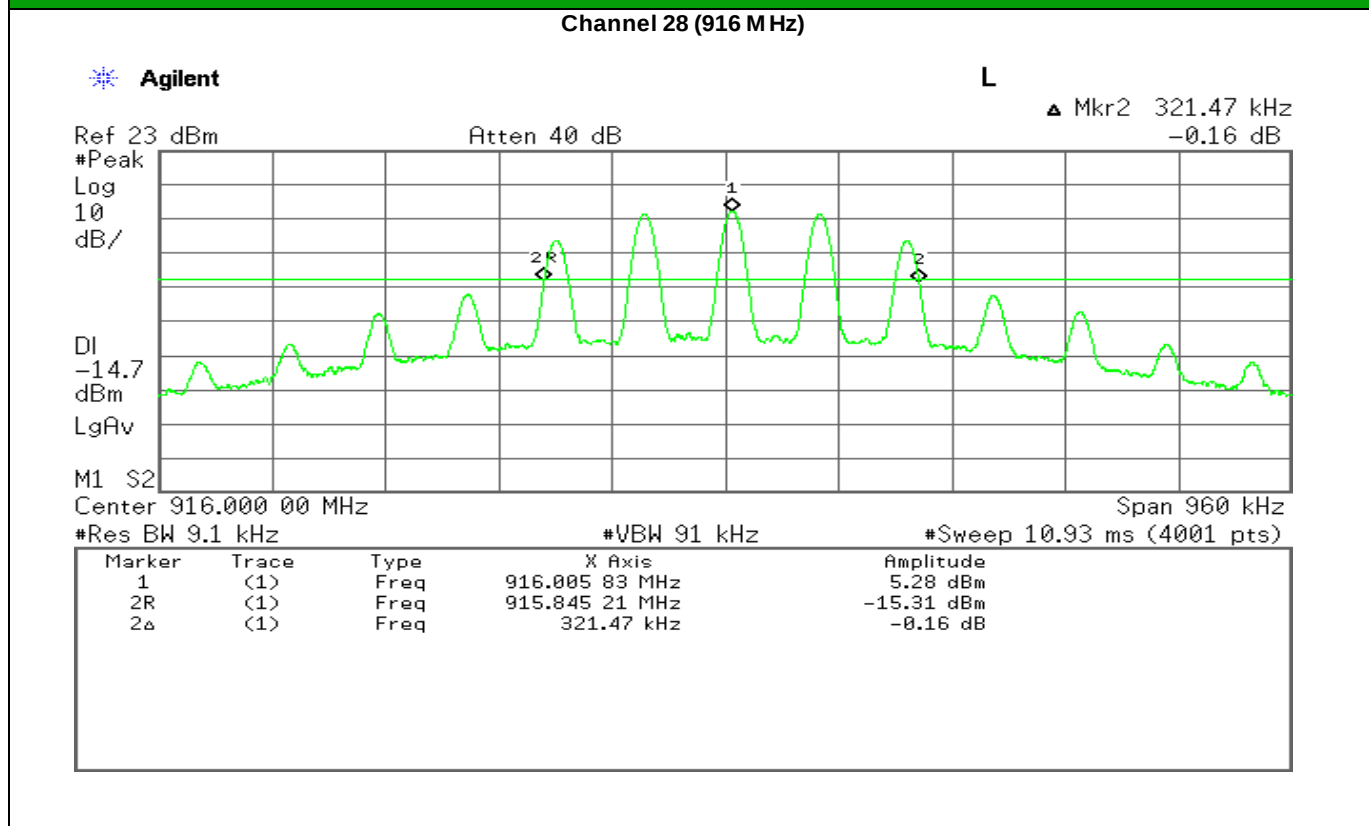
#### TEST PARAMETERS

|                 |    |                      |    |
|-----------------|----|----------------------|----|
| Antenna Height  | NA | Turntable Rotation   | NA |
| Equipment Class | NA | Measurement Distance | NA |

#### TEST EQUIPMENT

| Y/N | Equipment         | Make    | Model  | Serial Number | Cal Due Date |
|-----|-------------------|---------|--------|---------------|--------------|
| Y   | Spectrum Analyzer | Agilent | E4440A | MY41000078    | 2017-05-18   |
| Y   | RF Cable          | Digikey | 1      | NA            | NA           |

## TEST GRAPHS



## TEST RESULT

| Channel | Frequency | Measured Bandwidth | Limit       | Result |
|---------|-----------|--------------------|-------------|--------|
| #       | MHz       | KHz                | KHz         |        |
| 28      | 916       | 321.47             | ≥250 & ≤500 | PASS   |

## TEST SETUP PHOTOGRAPH

Refer Annexure -1

Conducted RF Test setup

## 2.2 PEAK OUTPUT POWER

|                       |                                           |                  |         |
|-----------------------|-------------------------------------------|------------------|---------|
| EUT Nomenclature      | Wireless Relay Module                     | Test Request No. | 20294-1 |
| Model No.             | FW-RM                                     | Serial No.       | MEL-159 |
| Test Start Date       | 2016-08-30                                | Temperature (°C) | 23.6°C  |
| Test End Date         | 2016-08-30                                | Humidity RH (%)  | 51.9%RH |
| Tested By             | Jose Badia/Arnoldo Garcia                 | Pressure (mbar)  | NR      |
| Input Voltage / Freq. | 3.3 Vdc                                   |                  |         |
| Operating Mode        | Refer Page 5 for Operating Mode Table     |                  |         |
| Test configuration    | Refer Page 5 for Test Configuration Table |                  |         |
| Deviation from Std.   | NA                                        |                  |         |
| Applicable standard   | FCC Part 15.247:2010                      |                  |         |
| Test Method           | DA 00-705                                 |                  |         |
| Comment               | NA                                        |                  |         |

### TEST DETAILS

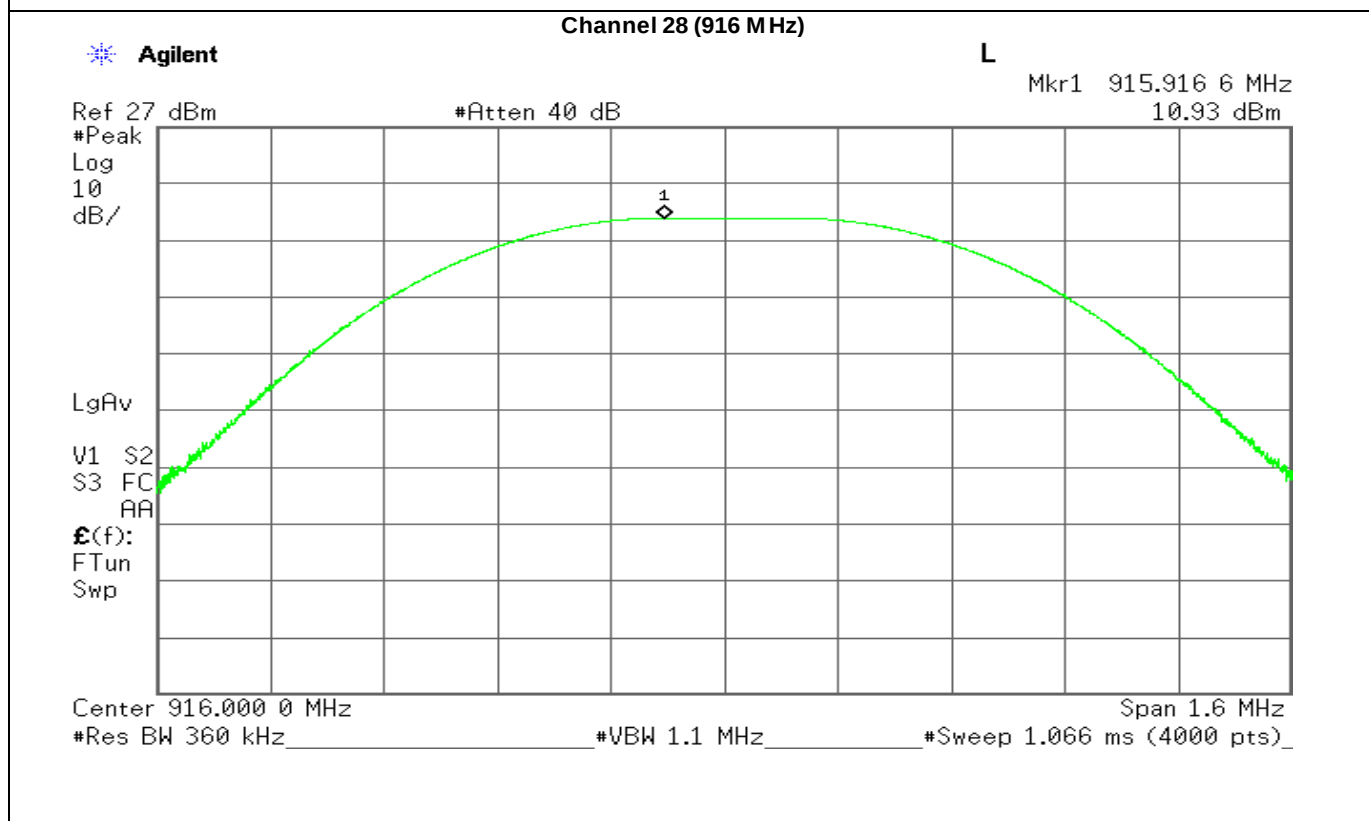
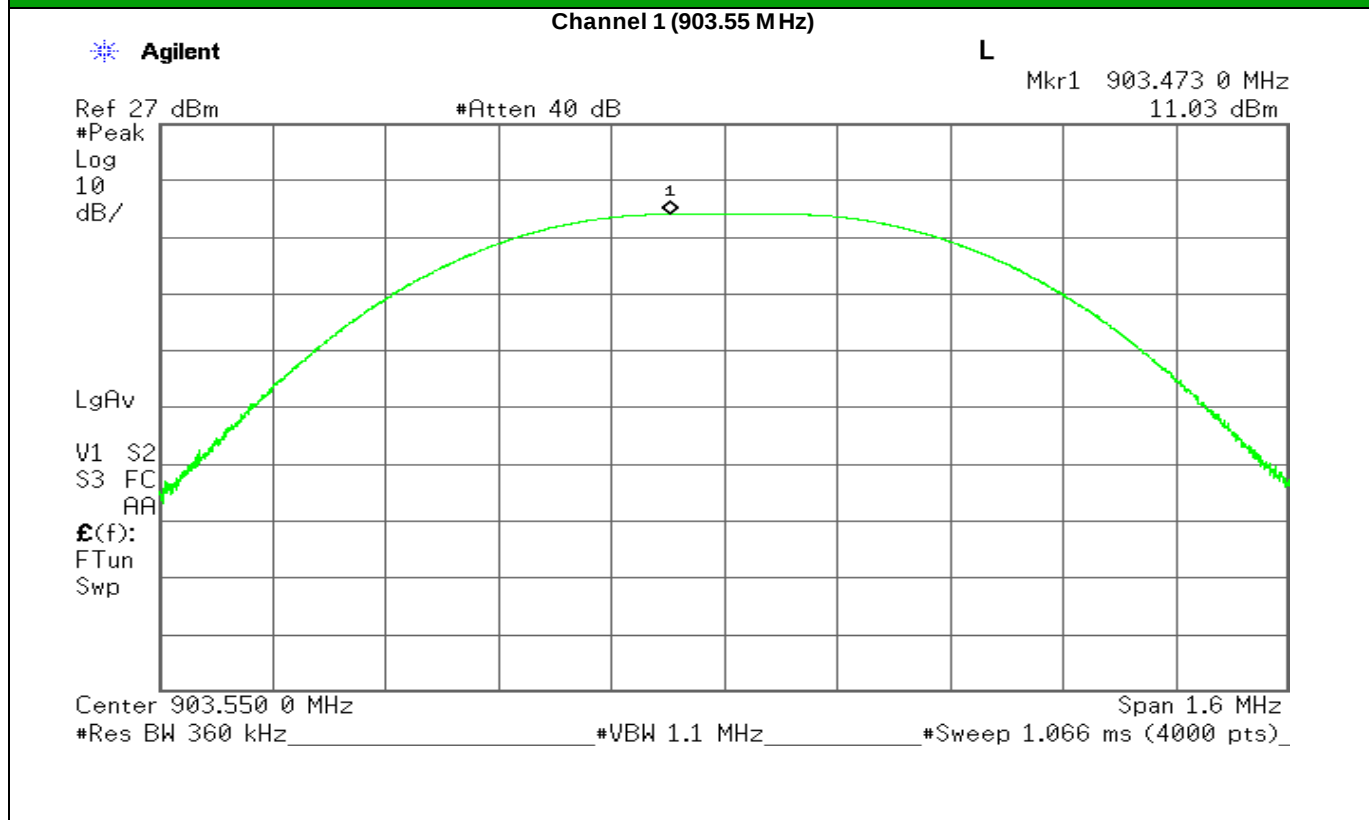
|        |                                   |                                               |
|--------|-----------------------------------|-----------------------------------------------|
| Method | Radiated <input type="checkbox"/> | Conducted <input checked="" type="checkbox"/> |
|--------|-----------------------------------|-----------------------------------------------|

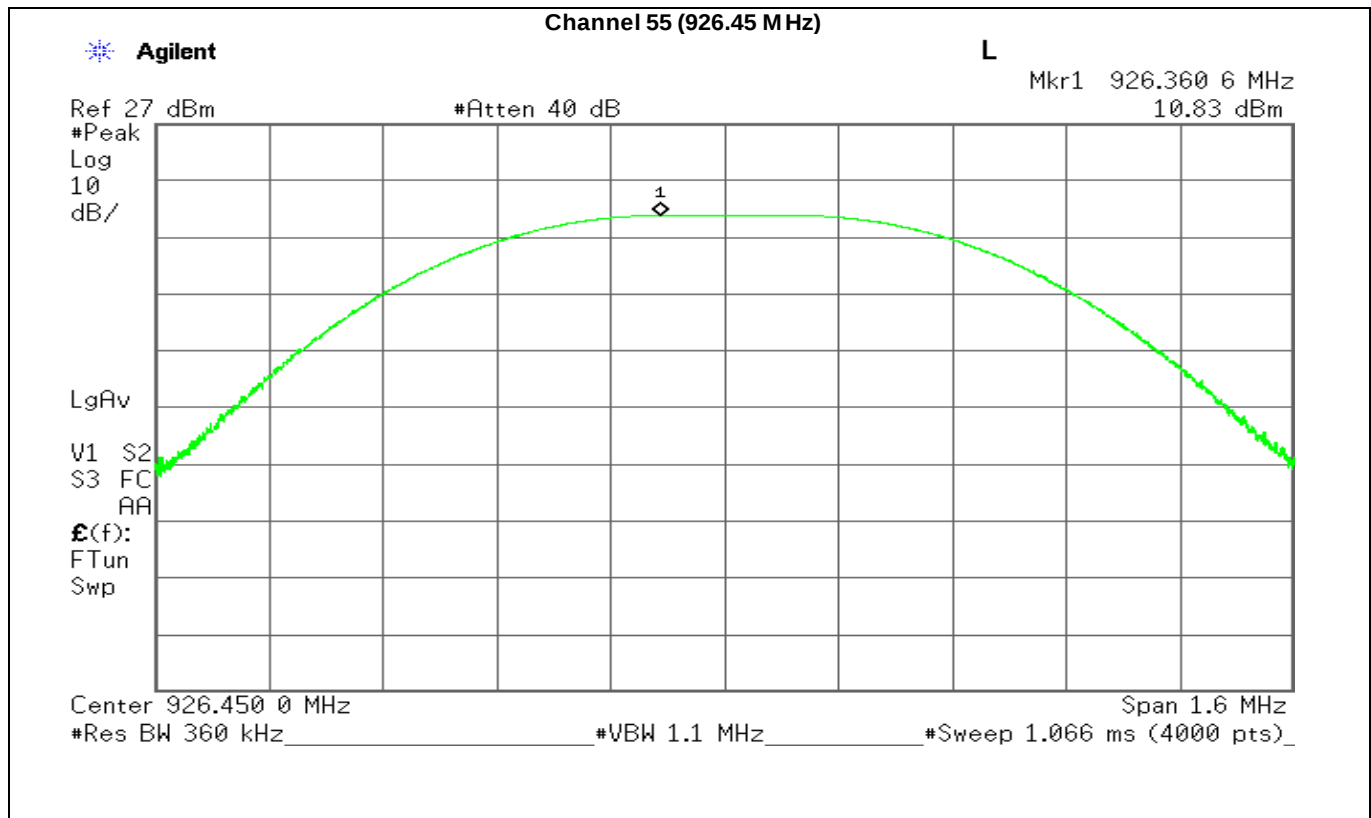
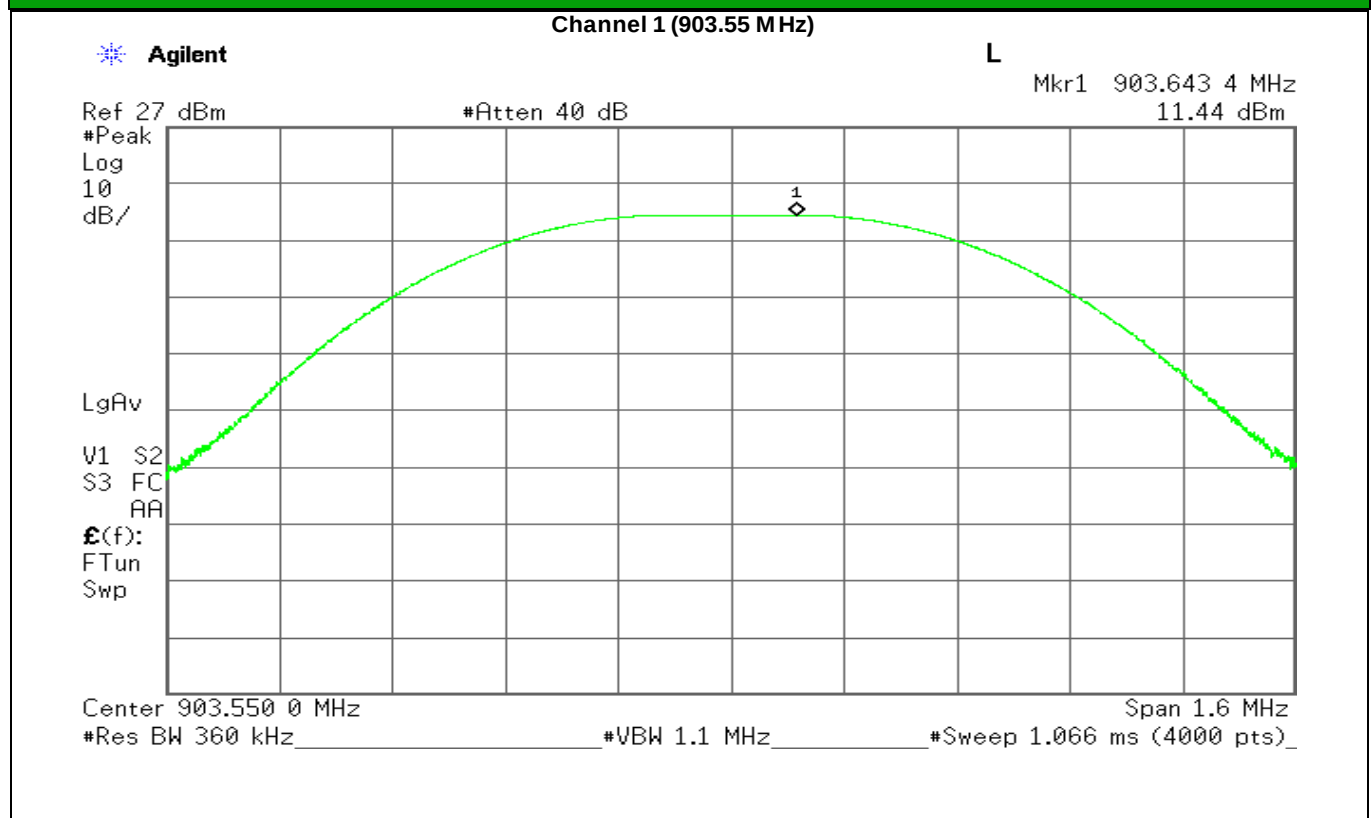
### TEST PARAMETERS

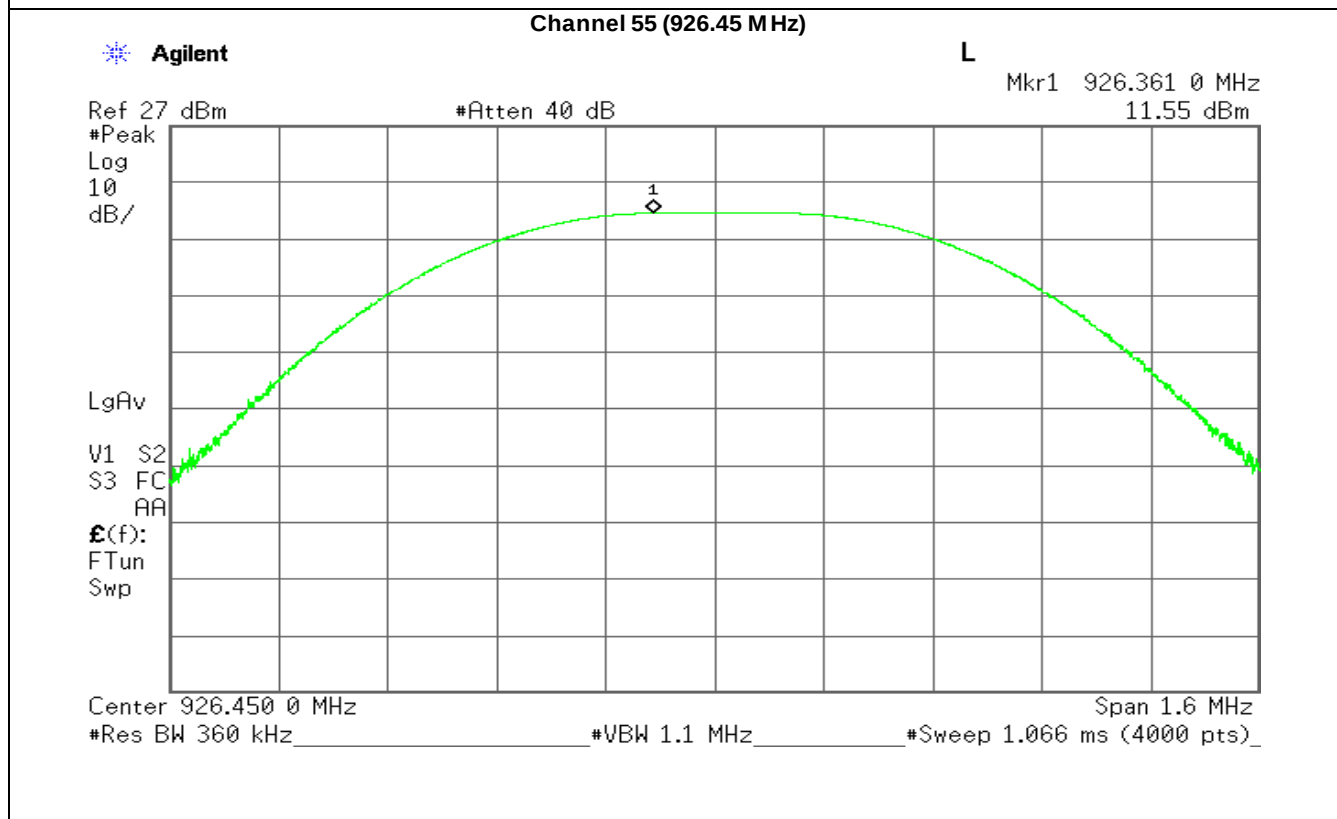
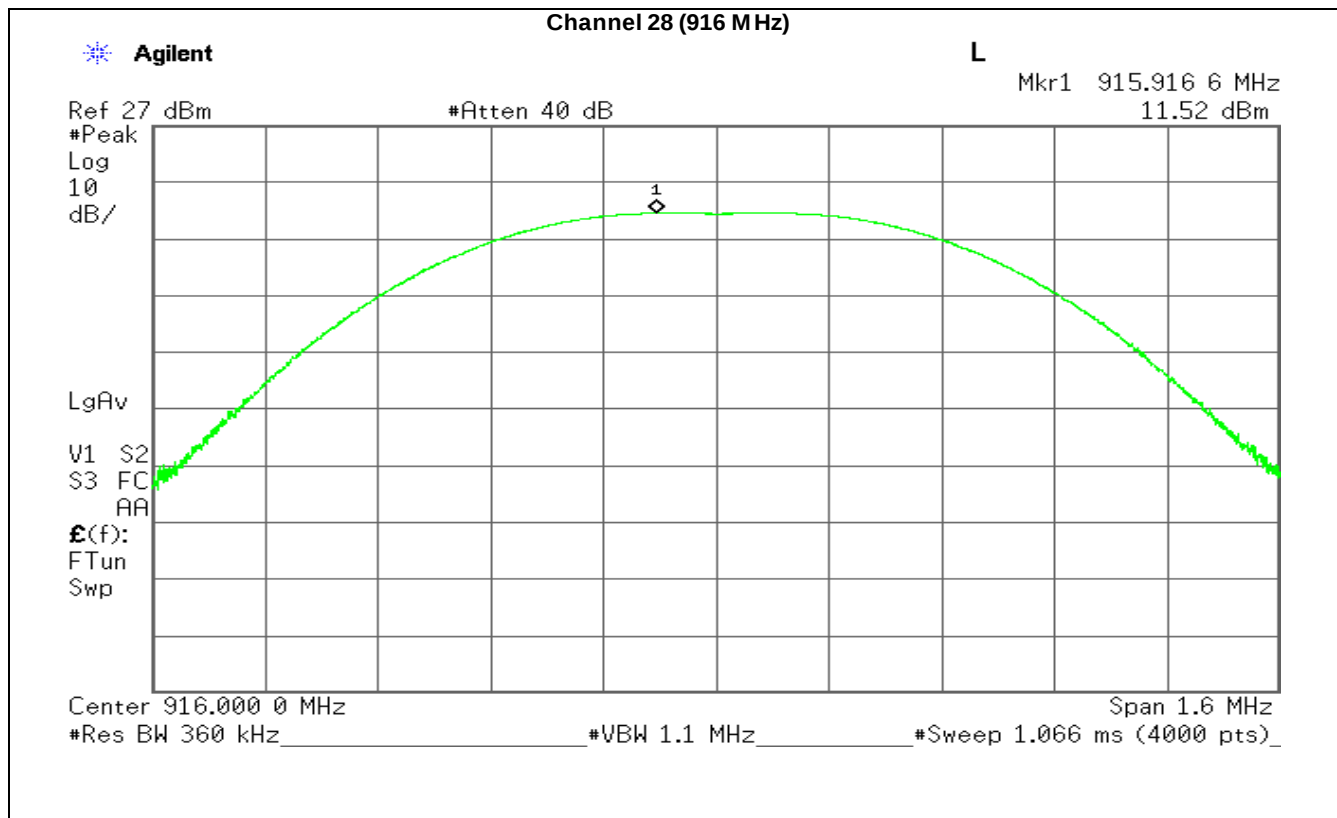
|                 |    |                      |    |
|-----------------|----|----------------------|----|
| Antenna Height  | NA | Turntable Rotation   | NA |
| Equipment Class | NA | Measurement Distance | NA |

### TEST EQUIPMENT

| Y/N | Equipment         | Make    | Model  | Serial Number | Cal Due Date |
|-----|-------------------|---------|--------|---------------|--------------|
| Y   | Spectrum Analyzer | Agilent | E4440A | MY41000078    | 2017-05-18   |
| Y   | RF Cable          | Digikey | 1      | NA            | NA           |

**ANTENNA 1 TEST GRAPHS**

**ANTENNA 2 TEST GRAPHS**



## ANTENNA 3 TEST GRAPHS

Channel 1 (903.55 MHz)

Agilent

L

Mkr1 903.463 0 MHz  
11.28 dBm

Ref 27 dBm

#Atten 40 dB

#Peak  
Log  
10  
dB/

LgAv

V1 S2  
S3 FC  
AAE(f):  
FTun  
Swp

Center 903.550 0 MHz

Span 1.6 MHz

#Res BW 360 kHz #VBW 1.1 MHz #Sweep 1.066 ms (4000 pts)

Channel 28 (916 MHz)

Agilent

L

Mkr1 915.916 2 MHz  
11.17 dBm

Ref 27 dBm

#Atten 40 dB

#Peak  
Log  
10  
dB/

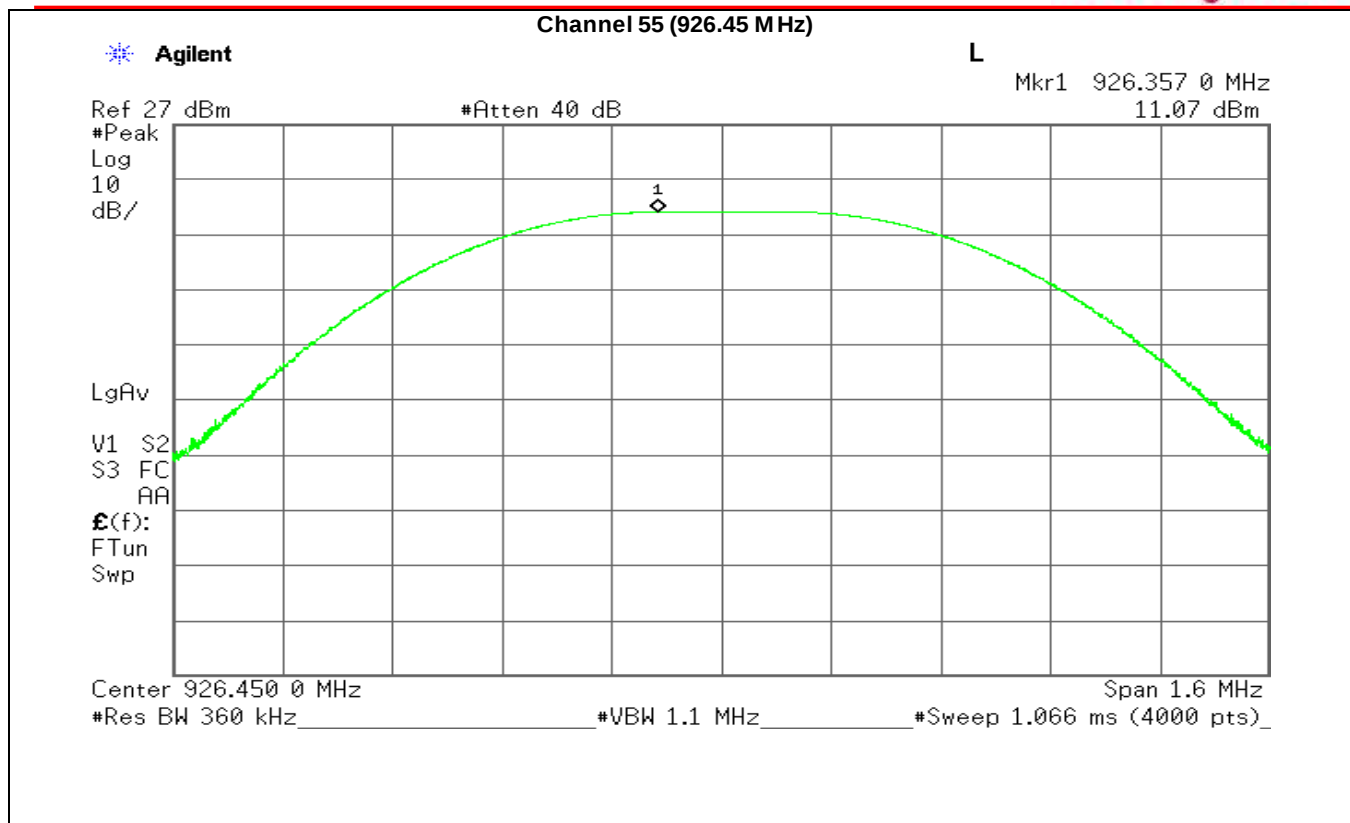
LgAv

V1 S2  
S3 FC  
AAE(f):  
FTun  
Swp

Center 916.000 0 MHz

Span 1.6 MHz

#Res BW 360 kHz #VBW 1.1 MHz #Sweep 1.066 ms (4000 pts)



### TEST RESULT

| Antenna | Channel | Frequency | Measured Power Level | Factor Loss | Transmitter Power Level | Limit   | Result |
|---------|---------|-----------|----------------------|-------------|-------------------------|---------|--------|
| #       | #       | MHz       | dBm                  | dB          | dBm                     | dBm     |        |
| 1       | 1       | 903.55    | 11.03                | 5.11        | 16.14                   | ≤23.979 | PASS   |
|         | 28      | 916       | 10.93                | 5.11        | 16.04                   | ≤23.979 | PASS   |
|         | 55      | 926.45    | 10.83                | 5.11        | 15.94                   | ≤23.979 | PASS   |
| 2       | 1       | 903.55    | 11.44                | 5.11        | 16.55                   | ≤23.979 | PASS   |
|         | 28      | 916       | 11.52                | 5.11        | 16.63                   | ≤23.979 | PASS   |
|         | 55      | 926.45    | 11.55                | 5.11        | 16.66                   | ≤23.979 | PASS   |
| 3       | 1       | 903.55    | 11.28                | 5.11        | 16.39                   | ≤23.979 | PASS   |
|         | 28      | 916       | 11.17                | 5.11        | 16.28                   | ≤23.979 | PASS   |
|         | 55      | 926.45    | 11.07                | 5.11        | 16.18                   | ≤23.979 | PASS   |

Note: Transmitter Output Power = Measured Level (dBm) + Factor Loss (dB)  
Factor Loss = Attenuator + Cable loss (dB)

### TEST SETUP PHOTOGRAPH

Refer Annexure -1

**Conducted RF Test setup**

### 2.3 CARRIER FREQUENCY SEPARATION

|                       |                                           |                  |         |
|-----------------------|-------------------------------------------|------------------|---------|
| EUT Nomenclature      | Wireless Relay Module                     | Test Request No. | 20294-1 |
| Model No.             | FW-RM                                     | Serial No.       | MEL-159 |
| Test Start Date       | 2017-04-19                                | Temperature (°C) | 23.6°C  |
| Test End Date         | 2017-04-21                                | Humidity RH (%)  | 51.9%RH |
| Tested By             | Jose Badia                                | Pressure (mbar)  | NR      |
| Input Voltage / Freq. | 3.3 Vdc                                   |                  |         |
| Operating Mode        | Refer Page 5 for Operating Mode Table     |                  |         |
| Test configuration    | Refer Page 5 for Test Configuration Table |                  |         |
| Deviation from Std.   | NA                                        |                  |         |
| Applicable standard   | FCC Part 15.247:2010                      |                  |         |
| Test Method           | DA 00-705                                 |                  |         |
| Comment               | NA                                        |                  |         |

#### TEST DETAILS

|        |                                   |                                               |
|--------|-----------------------------------|-----------------------------------------------|
| Method | Radiated <input type="checkbox"/> | Conducted <input checked="" type="checkbox"/> |
|--------|-----------------------------------|-----------------------------------------------|

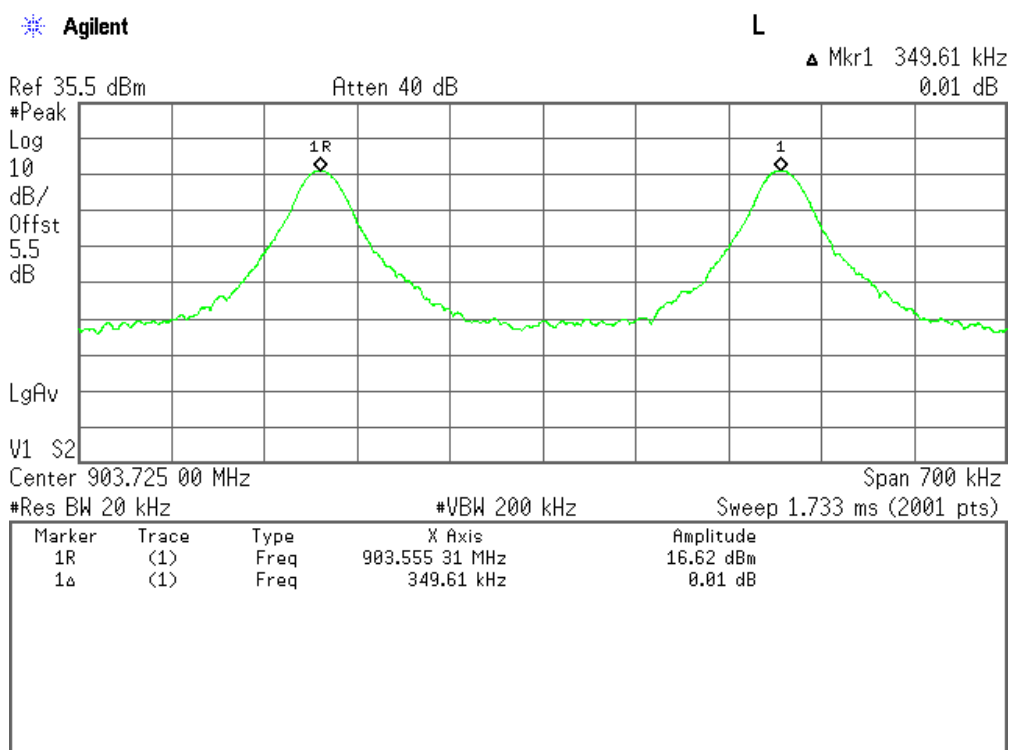
#### TEST PARAMETERS

|                 |    |                      |    |
|-----------------|----|----------------------|----|
| Antenna Height  | NA | Turntable Rotation   | NA |
| Equipment Class | NA | Measurement Distance | NA |

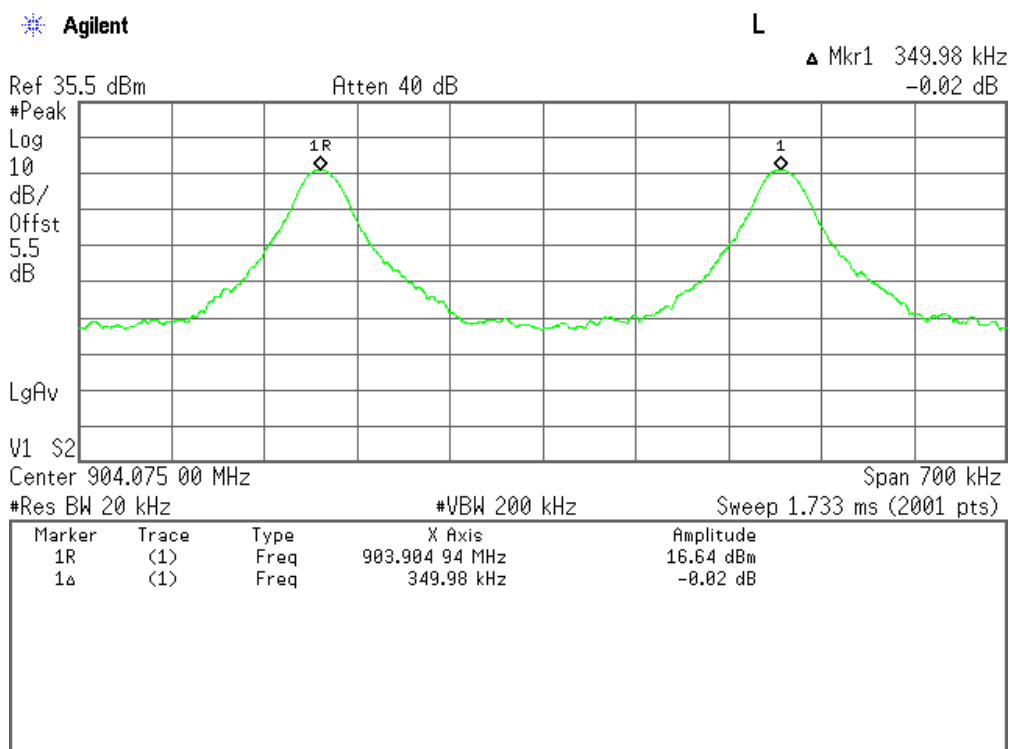
#### TEST EQUIPMENT

| Y/N | Equipment         | Make    | Model  | Serial Number | Cal Due Date |
|-----|-------------------|---------|--------|---------------|--------------|
| Y   | Spectrum Analyzer | Agilent | E4440A | MY41000078    | 2017-05-18   |
| Y   | RF Cable          | Digikey | 1      | NA            | NA           |

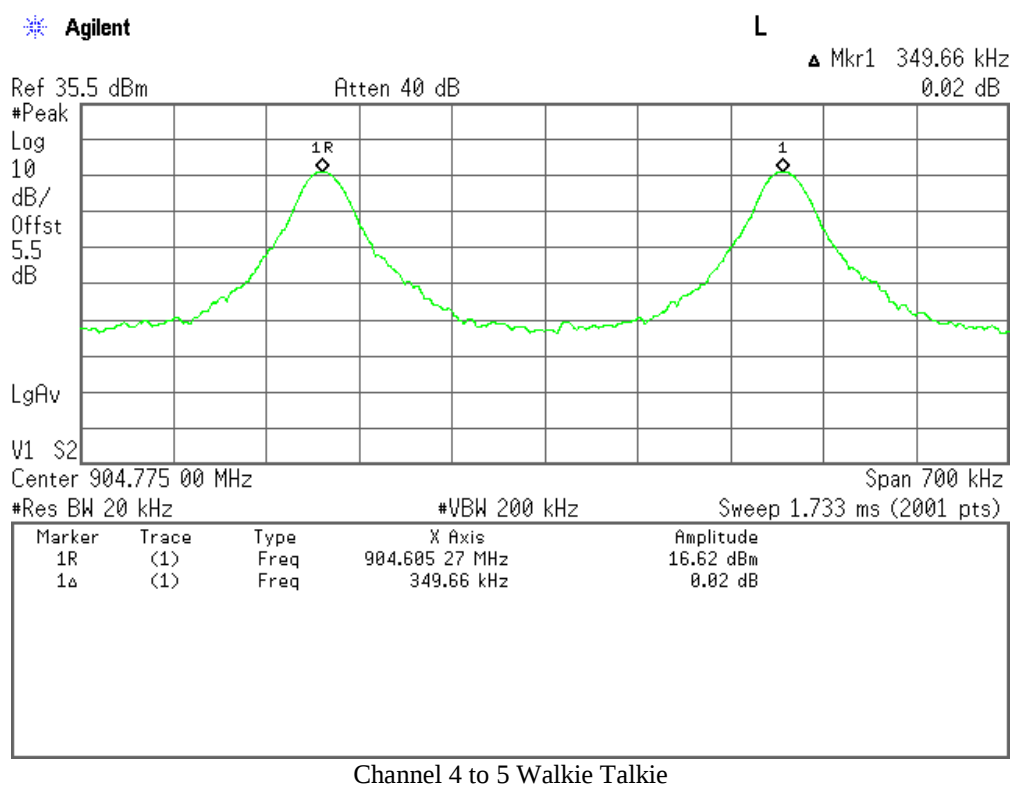
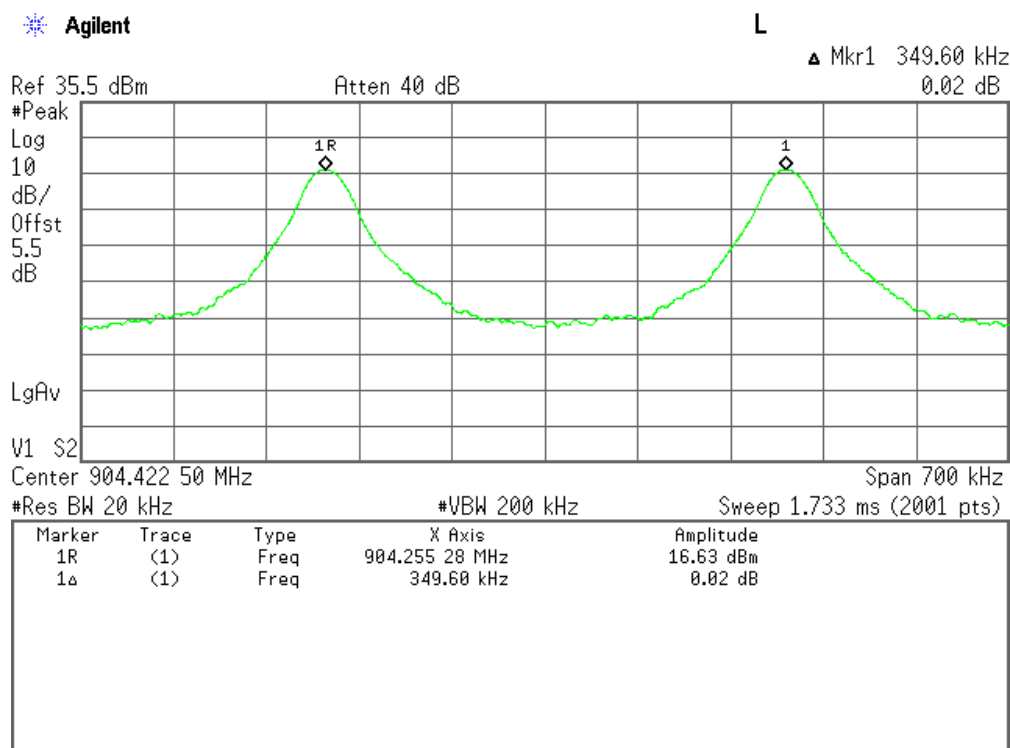
## TEST GRAPHS

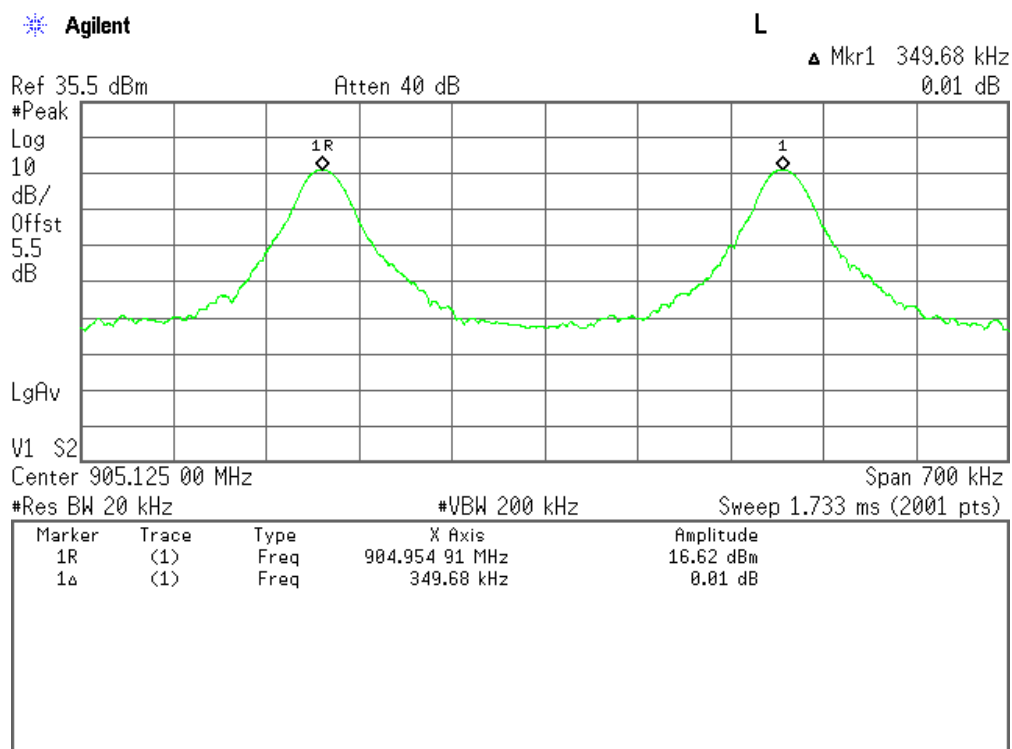


Channel 1 to 2 Walkie Talkie

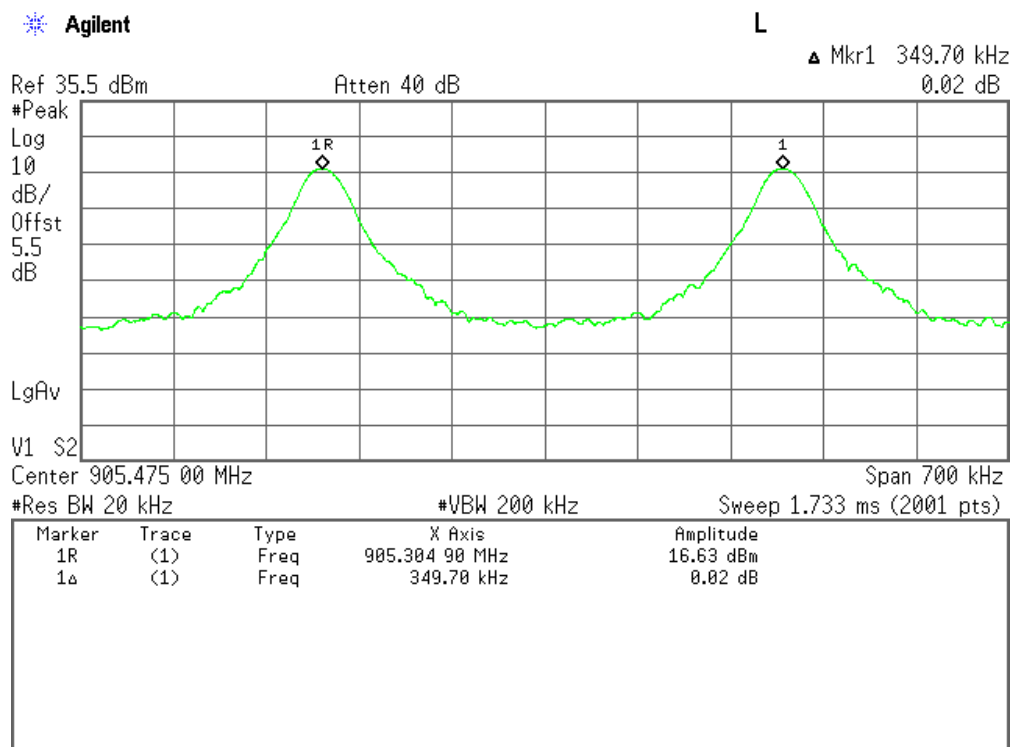


Channel 2 to 3 Walkie Talkie

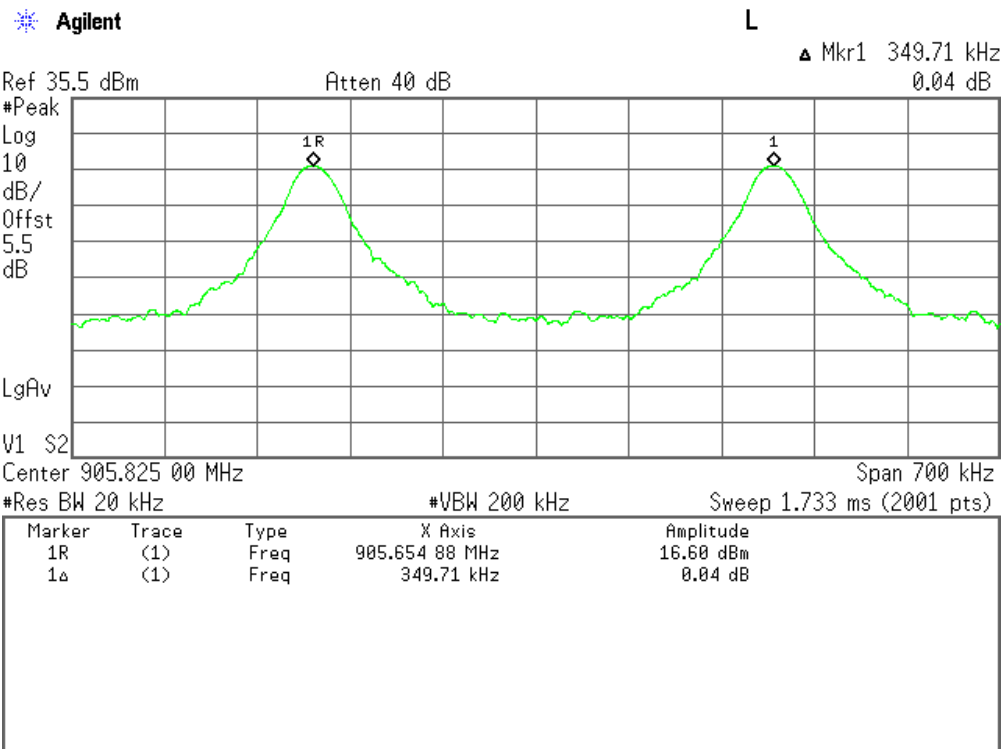




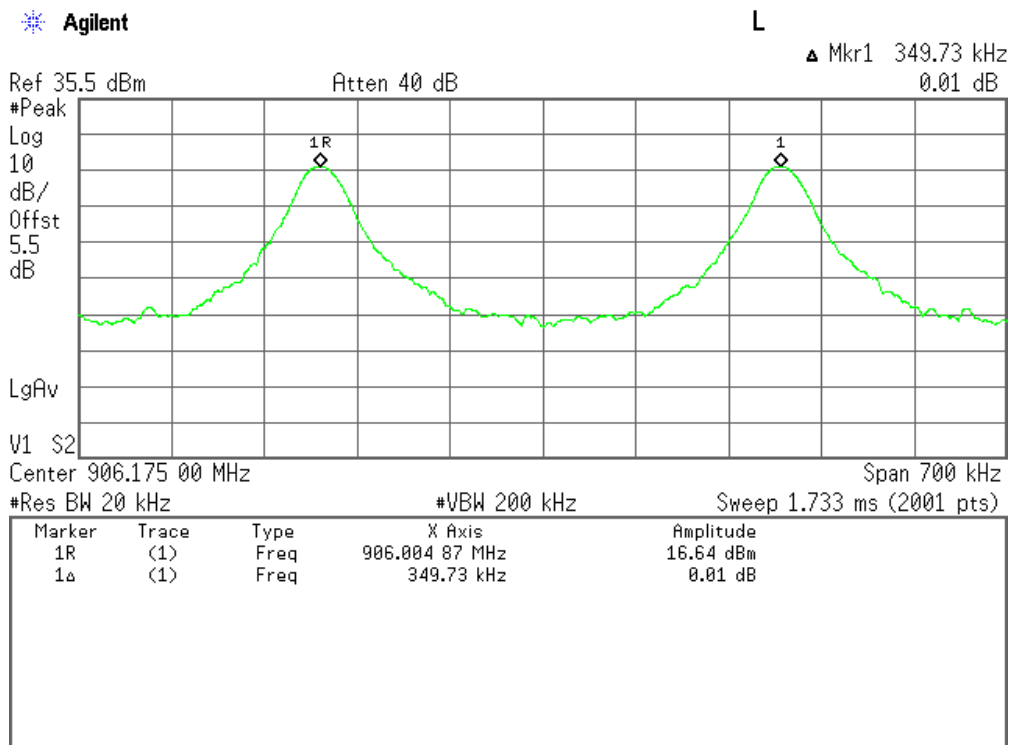
Channel 5 to 6 Walkie Talkie



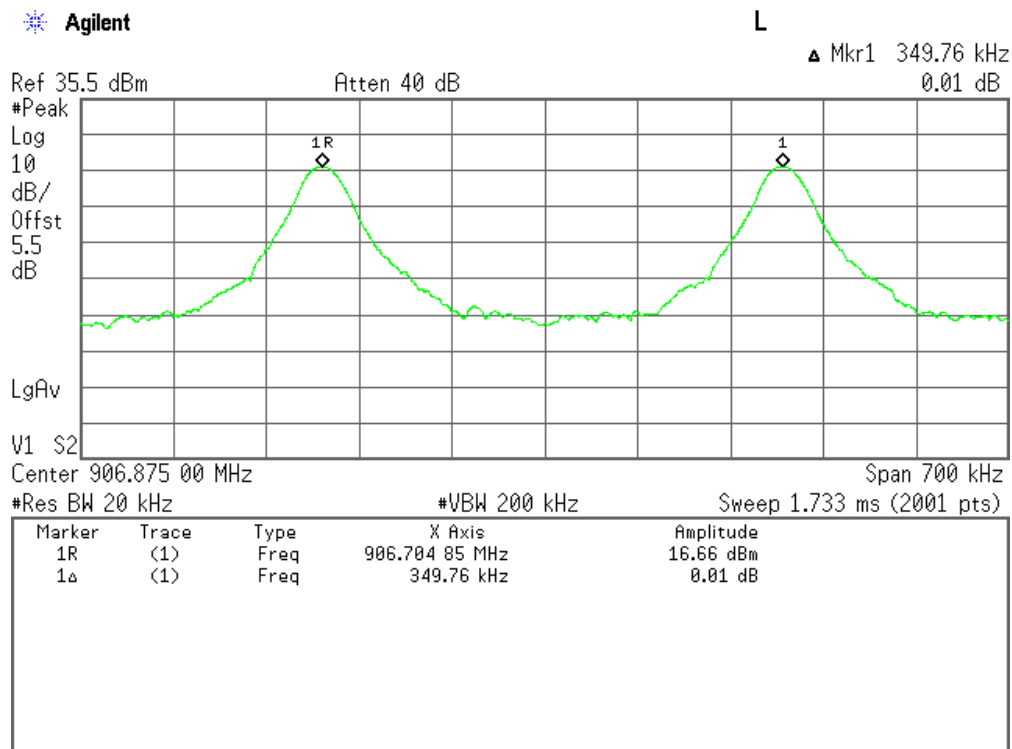
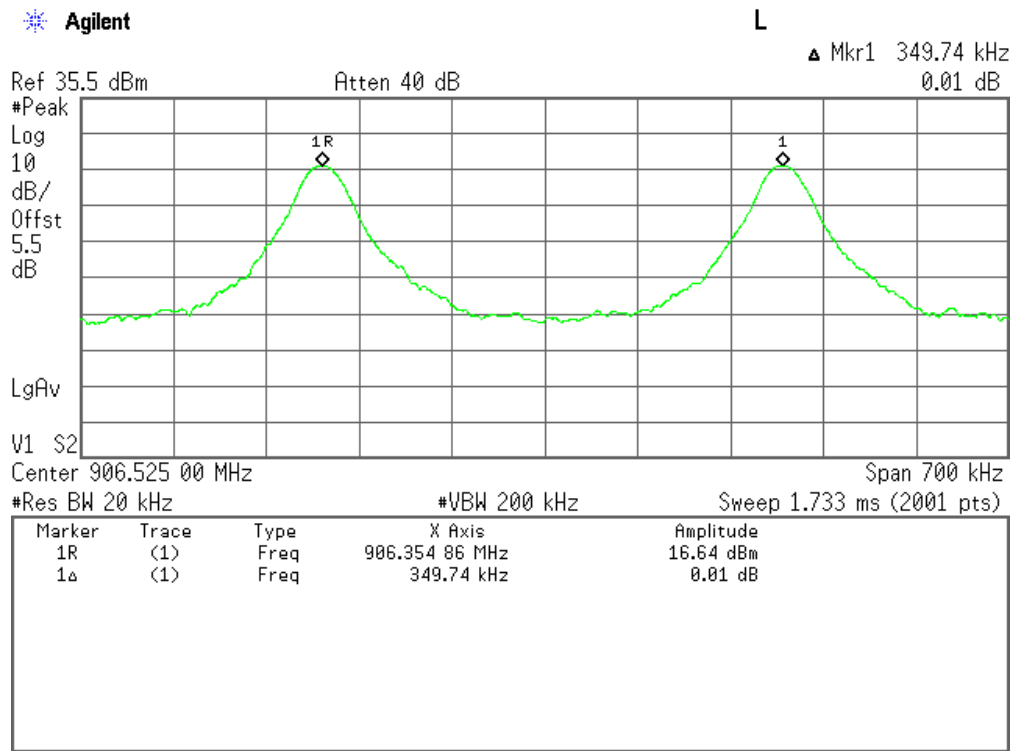
Channel 6 to 7 Walkie Talkie

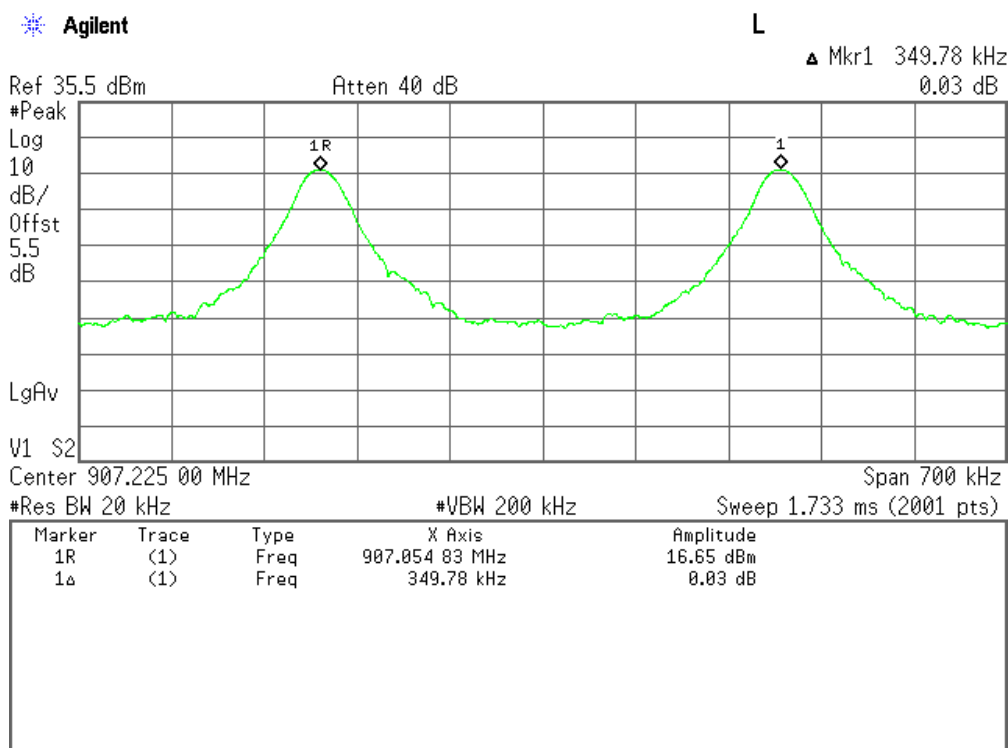


Channel 7 to 8 Walkie Talkie

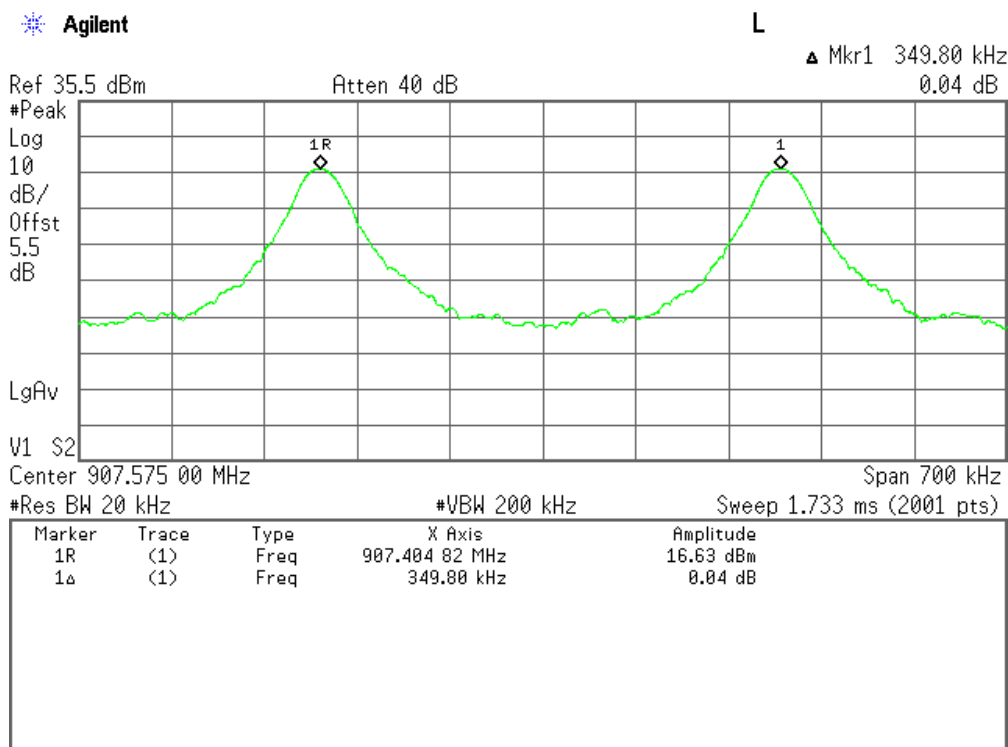


Channel 8 to 9 Walkie Talkie

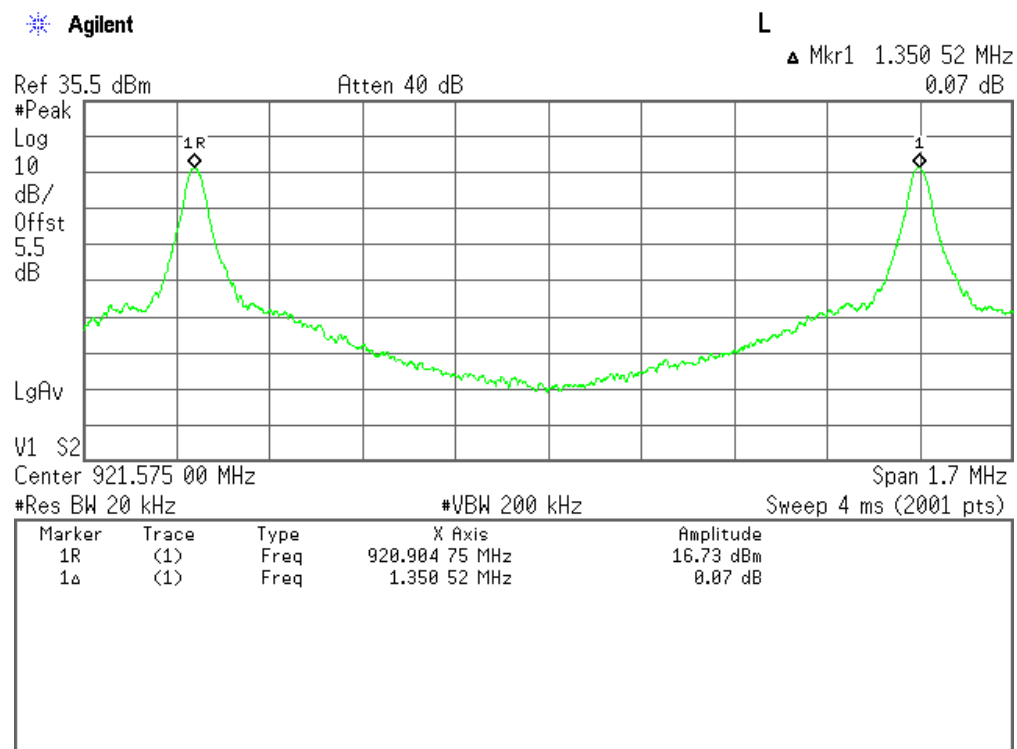
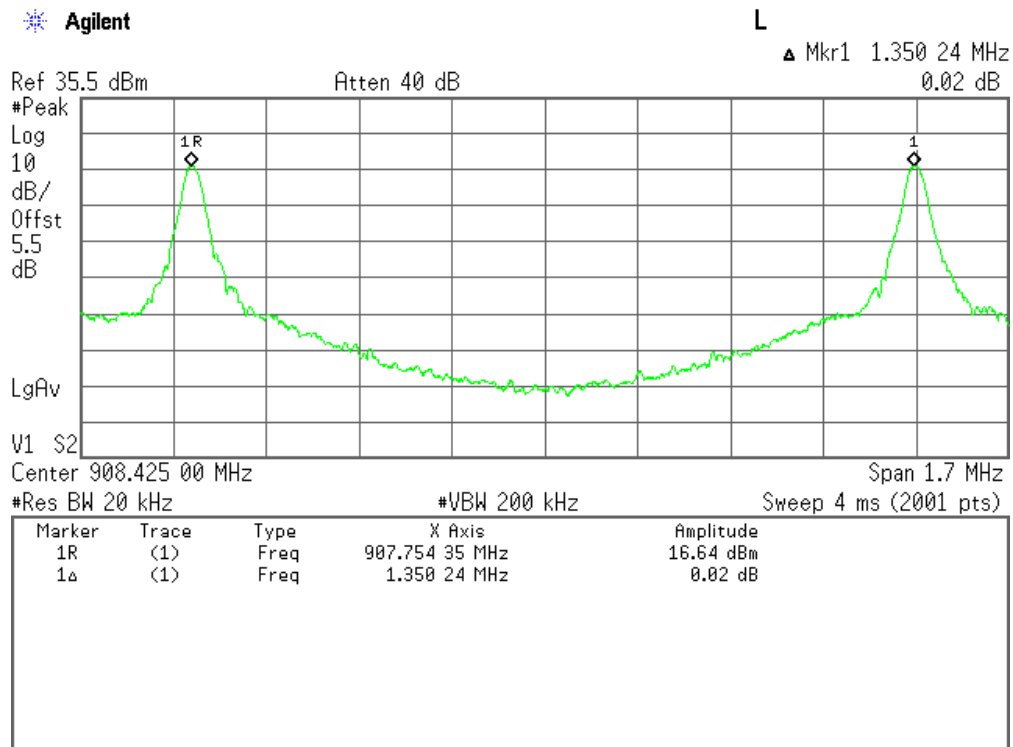




Channel 11 to 12 Walkie Talkie



Channel 12 to 13 Walkie Talkie



Agilent

L

▲ Mkr1 349.72 kHz  
0.02 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 922.425 00 MHz

Span 700 kHz

#Res BW 20 kHz

#VBW 200 kHz

Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 922.254 88 MHz | 16.77 dBm |
| 1Δ     | (1)   | Freq | 349.72 kHz     | 0.02 dB   |

Channel 16 to 17 Walkie Talkie

Agilent

L

▲ Mkr1 349.73 kHz  
0.01 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 922.775 00 MHz

Span 700 kHz

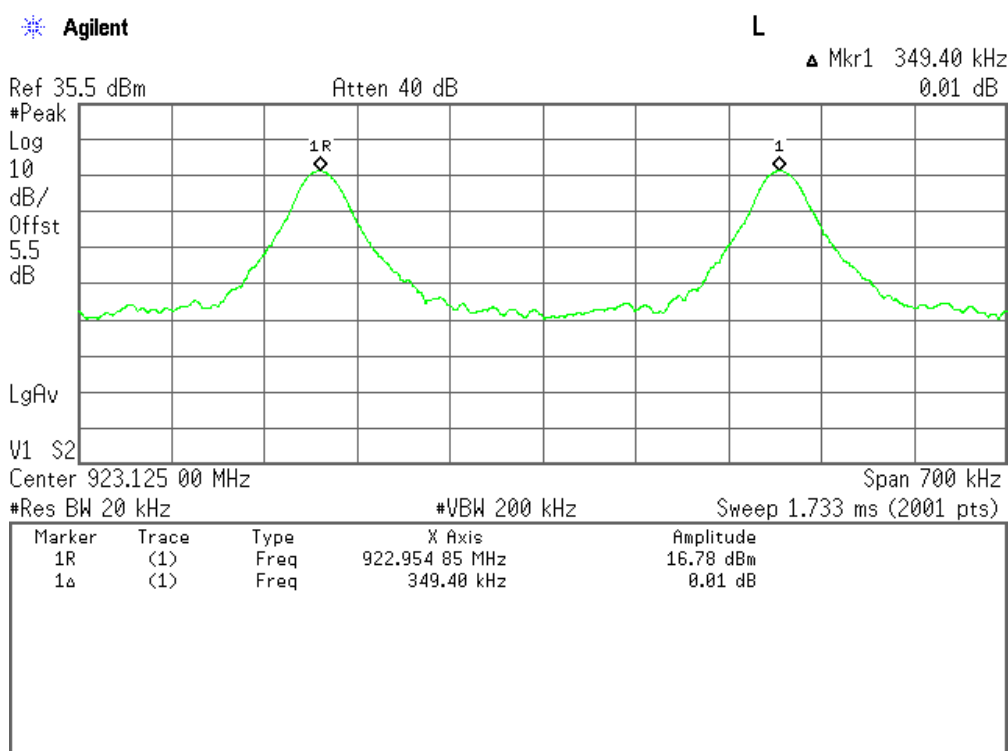
#Res BW 20 kHz

#VBW 200 kHz

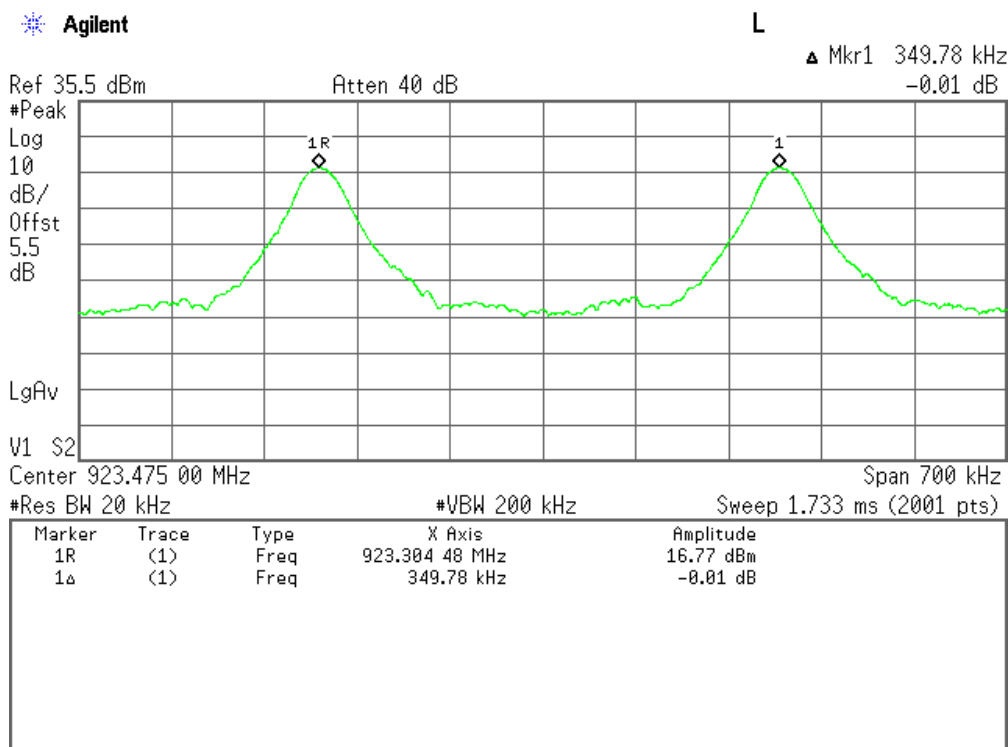
Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 922.685 22 MHz | 16.79 dBm |
| 1Δ     | (1)   | Freq | 349.73 kHz     | 0.01 dB   |

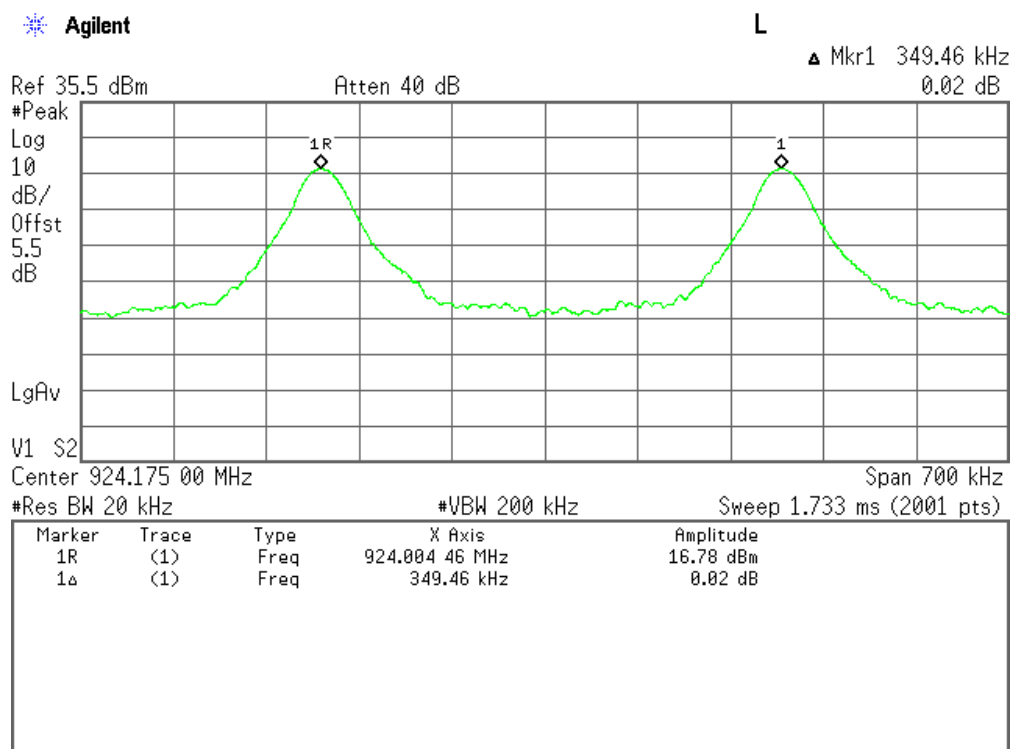
Channel 17 to 18 Walkie Talkie



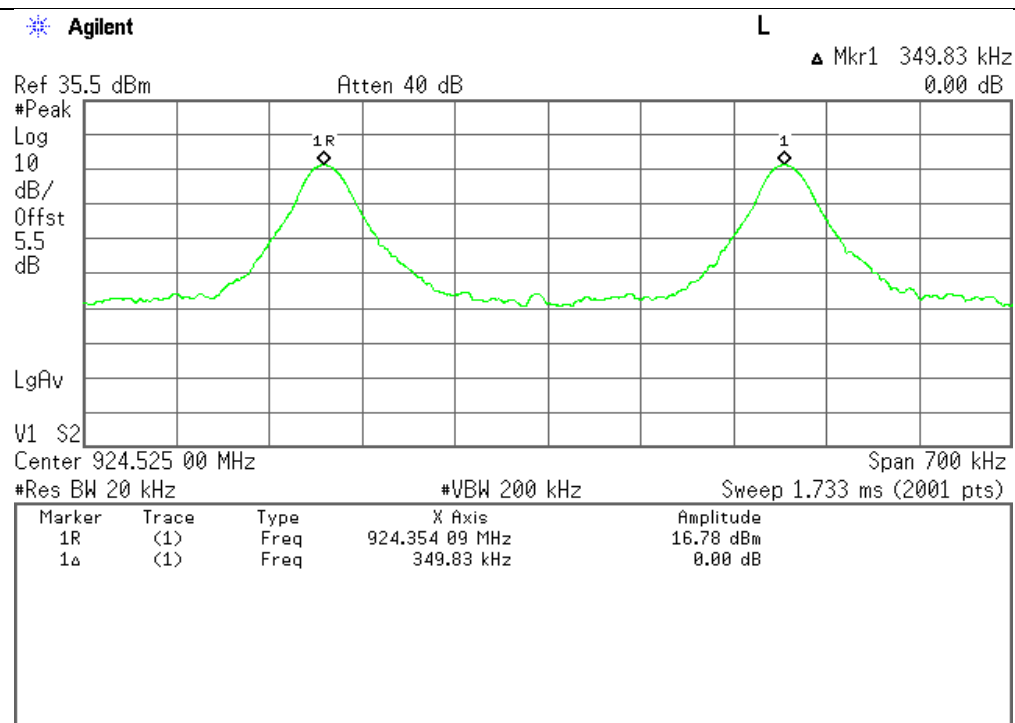
Channel 18 to 19 Walkie Talkie



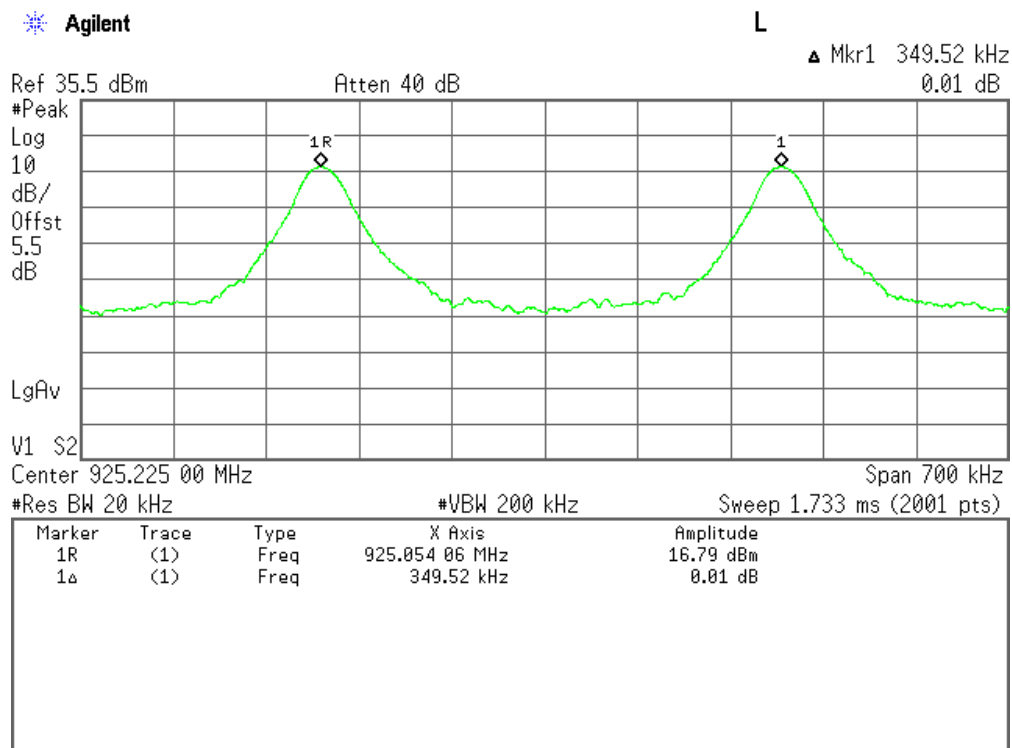
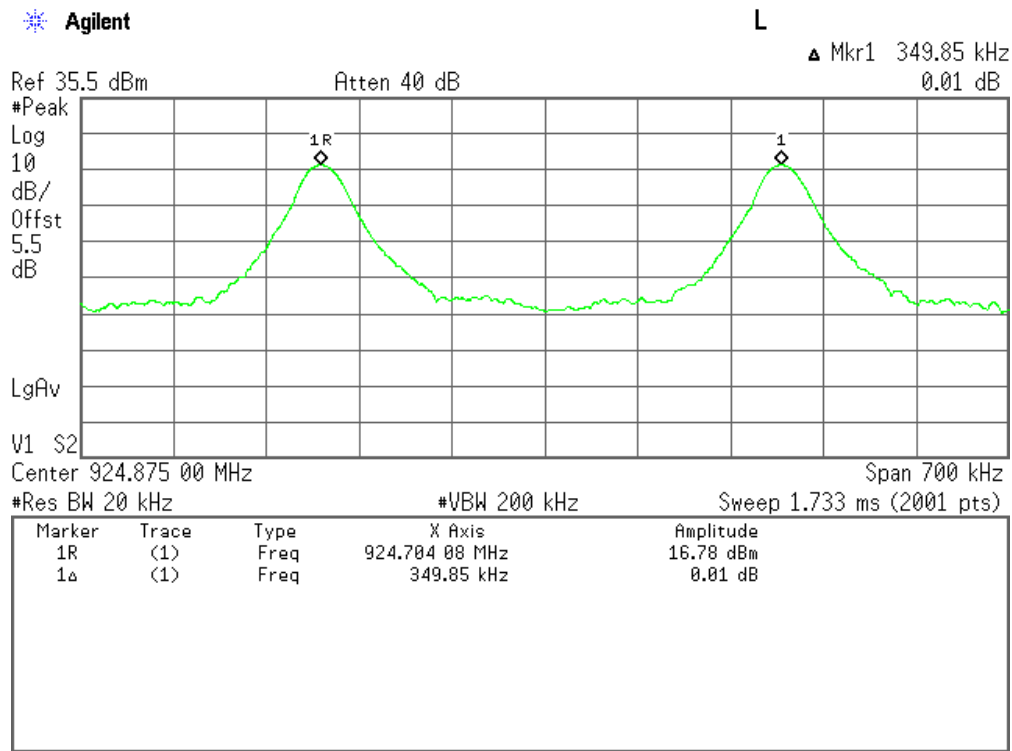
Channel 19 to 20 Walkie Talkie



Channel 21 to 22 Walkie Talkie



Channel 22 to 23 Walkie Talkie



Agilent

T

▲ Mkr1 349.89 kHz  
0.01 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 925.575 00 MHz

Span 700 kHz

#Res BW 20 kHz

#VBW 200 kHz

Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 925.404 05 MHz | 16.77 dBm |
| 1a     | (1)   | Freq | 349.89 kHz     | 0.01 dB   |

Channel 25 to 26 Walkie Talkie

Agilent

L

▲ Mkr1 349.91 kHz  
0.02 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 925.925 00 MHz

Span 700 kHz

#Res BW 20 kHz

#VBW 200 kHz

Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 925.754 04 MHz | 16.77 dBm |
| 1a     | (1)   | Freq | 349.91 kHz     | 0.02 dB   |

Channel 26 to 27 Walkie Talkie

Agilent

L

▲ Mkr1 349.93 kHz  
0.03 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 926.275 00 MHz

Span 700 kHz

#Res BW 20 kHz

#VBW 200 kHz

Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 926.104 02 MHz | 16.77 dBm |
| 1a     | (1)   | Freq | 349.93 kHz     | 0.03 dB   |

Channel 27 to 28 Walkie Talkie

Agilent

L

▲ Mkr1 349.89 kHz  
-0.02 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 909.275 00 MHz

Span 700 kHz

#Res BW 20 kHz

#VBW 200 kHz

Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 909.104 40 MHz | 16.67 dBm |
| 1a     | (1)   | Freq | 349.89 kHz     | -0.02 dB  |

Channel 1 to 2 Normal

Agilent

L

▲ Mkr1 349.55 kHz  
0.02 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 909.625 00 MHz

Span 700 kHz

#Res BW 20 kHz

#VBW 200 kHz

Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 909.454 74 MHz | 16.66 dBm |
| 1Δ     | (1)   | Freq | 349.55 kHz     | 0.02 dB   |

Channel 2 to 3 Normal

Agilent

L

▲ Mkr1 349.57 kHz  
0.01 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 909.975 00 MHz

Span 700 kHz

#Res BW 20 kHz

#VBW 200 kHz

Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 909.884 73 MHz | 16.68 dBm |
| 1Δ     | (1)   | Freq | 349.57 kHz     | 0.01 dB   |

Channel 3 to 4 Normal

Agilent

L

▲ Mkr1 349.59 kHz  
0.04 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 910.325 00 MHz

Span 700 kHz

#Res BW 20 kHz

#VBW 200 kHz

Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 910.154 72 MHz | 16.65 dBm |
| 1a     | (1)   | Freq | 349.59 kHz     | 0.04 dB   |

Channel 4 to 5 Normal

Agilent

L

▲ Mkr1 349.61 kHz  
0.01 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 910.675 00 MHz

Span 700 kHz

#Res BW 20 kHz

#VBW 200 kHz

Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 910.504 70 MHz | 16.68 dBm |
| 1a     | (1)   | Freq | 349.61 kHz     | 0.01 dB   |

Channel 5 to 6 Normal

Agilent

L

▲ Mkr1 349.63 kHz  
0.02 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 911.025 00 MHz

Span 700 kHz

#Res BW 20 kHz

#VBW 200 kHz

Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 910.854 69 MHz | 16.67 dBm |
| 1Δ     | (1)   | Freq | 349.63 kHz     | 0.02 dB   |

Channel 6 to 7 Normal

Agilent

L

▲ Mkr1 349.65 kHz  
0.02 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 911.375 50 MHz

Span 700 kHz

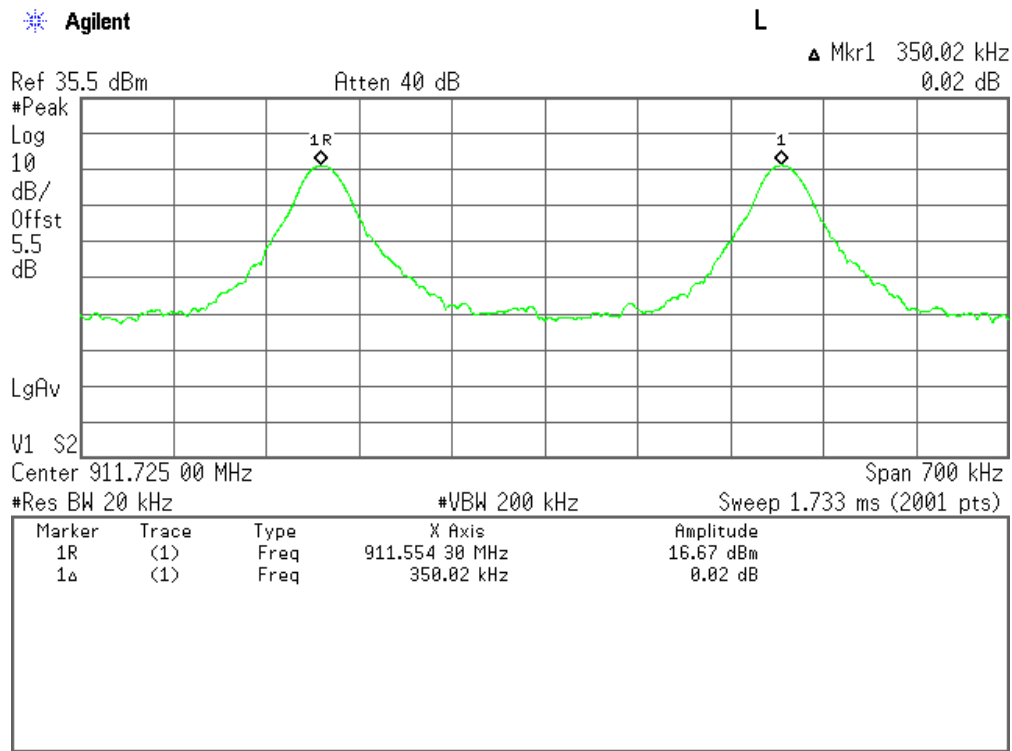
#Res BW 20 kHz

#VBW 200 kHz

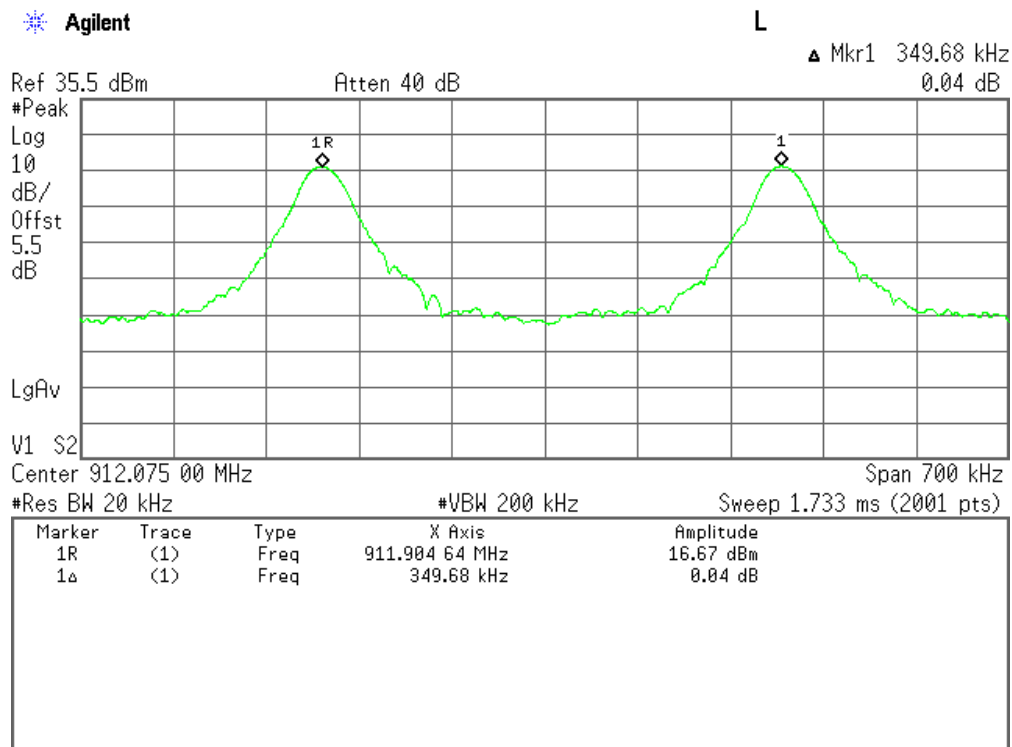
Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 911.204 82 MHz | 16.68 dBm |
| 1Δ     | (1)   | Freq | 349.65 kHz     | 0.02 dB   |

Channel 7 to 8 Normal



Channel 8 to 9 Normal



Channel 9 to 10 Normal

Agilent

L

▲ Mkr1 349.70 kHz  
0.01 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 912.425 00 MHz

Span 700 kHz

#Res BW 20 kHz

#VBW 200 kHz

Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 912.254 63 MHz | 16.70 dBm |
| 1Δ     | (1)   | Freq | 349.70 kHz     | 0.01 dB   |

Channel 10 to 11 Normal

Agilent

L

▲ Mkr1 349.73 kHz  
0.01 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 912.775 00 MHz

Span 700 kHz

#Res BW 20 kHz

#VBW 200 kHz

Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 912.604 61 MHz | 16.70 dBm |
| 1Δ     | (1)   | Freq | 349.73 kHz     | 0.01 dB   |

Channel 11 to 12 Normal

Agilent

L

▲ Mkr1 350.10 kHz  
0.03 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 913.125 00 MHz

Span 700 kHz

#Res BW 20 kHz

#VBW 200 kHz

Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 912.954 24 MHz | 16.69 dBm |
| 1Δ     | (1)   | Freq | 350.10 kHz     | 0.03 dB   |

Channel 12 to 13 Normal

Agilent

L

▲ Mkr1 350.13 kHz  
-0.03 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 913.475 00 MHz

Span 700 kHz

#Res BW 20 kHz

#VBW 200 kHz

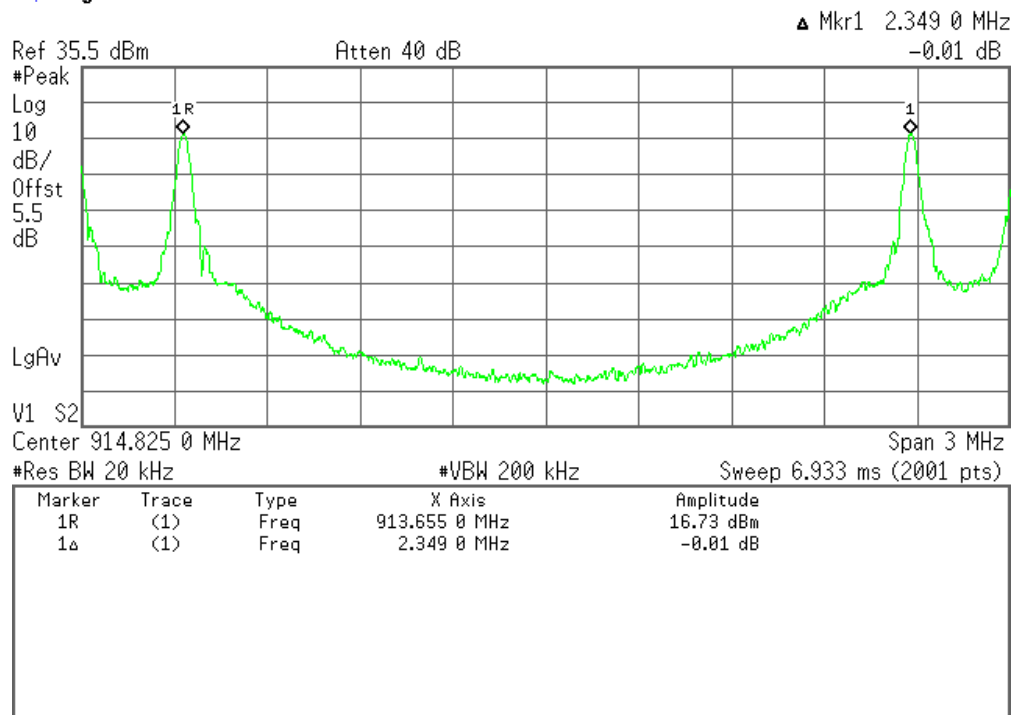
Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 913.303 87 MHz | 16.68 dBm |
| 1Δ     | (1)   | Freq | 350.13 kHz     | -0.03 dB  |

Channel 13 to 14 Normal

Agilent

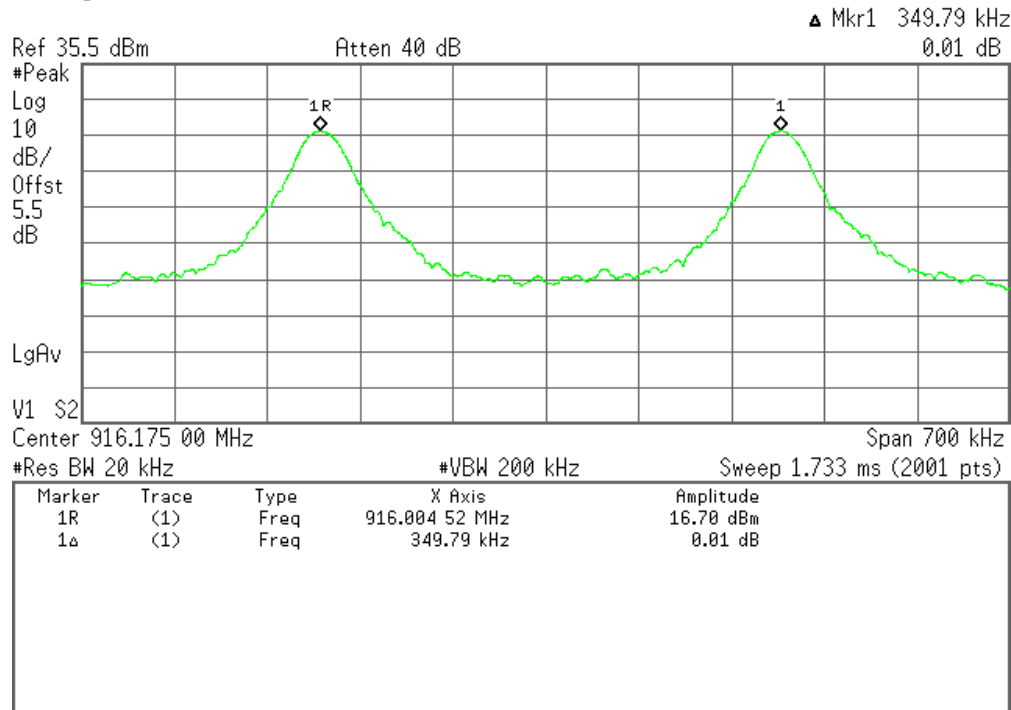
L



Channel 14 to 15 Normal

Agilent

L



Channel 15 to 16 Normal

Agilent

L

▲ Mkr1 350.13 kHz  
-0.03 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 916.525 00 MHz

Span 700 kHz

#Res BW 20 kHz

#VBW 200 kHz

Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 916.354 18 MHz | 16.72 dBm |
| 1Δ     | (1)   | Freq | 350.13 kHz     | -0.03 dB  |

Channel 16 to 17 Normal

Agilent

L

▲ Mkr1 349.76 kHz  
-0.01 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 916.875 00 MHz

Span 700 kHz

#Res BW 20 kHz

#VBW 200 kHz

Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 916.704 53 MHz | 16.72 dBm |
| 1Δ     | (1)   | Freq | 349.76 kHz     | -0.01 dB  |

Channel 17 to 18 Normal

Agilent

L

▲ Mkr1 349.51 kHz  
0.01 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 917.225 00 MHz

Span 700 kHz

#Res BW 20 kHz

#VBW 200 kHz

Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 917.054 33 MHz | 16.72 dBm |
| 1Δ     | (1)   | Freq | 349.51 kHz     | 0.01 dB   |

Channel 18 to 19 Normal

Agilent

L

▲ Mkr1 349.52 kHz  
0.01 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 917.575 00 MHz

Span 700 kHz

#Res BW 20 kHz

#VBW 200 kHz

Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 917.484 32 MHz | 16.73 dBm |
| 1Δ     | (1)   | Freq | 349.52 kHz     | 0.01 dB   |

Channel 19 to 20 Normal

Agilent

L

▲ Mkr1 349.54 kHz  
0.02 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 917.925 00 MHz

Span 700 kHz

#Res BW 20 kHz

#VBW 200 kHz

Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 917.754 31 MHz | 16.70 dBm |
| 1a     | (1)   | Freq | 349.54 kHz     | 0.02 dB   |

Channel 20 to 21 Normal

Agilent

L

▲ Mkr1 350.26 kHz  
0.04 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 918.275 00 MHz

Span 700 kHz

#Res BW 20 kHz

#VBW 200 kHz

Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 918.103 94 MHz | 16.71 dBm |
| 1a     | (1)   | Freq | 350.26 kHz     | 0.04 dB   |

Channel 21 to 22 Normal

Agilent

L

▲ Mkr1 349.56 kHz  
0.01 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 918.625 00 MHz

Span 700 kHz

#Res BW 20 kHz

#VBW 200 kHz

Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 918.454 29 MHz | 16.72 dBm |
| 1Δ     | (1)   | Freq | 349.56 kHz     | 0.01 dB   |

Channel 22 to 23 Normal

Agilent

L

▲ Mkr1 349.58 kHz  
0.02 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 918.975 00 MHz

Span 700 kHz

#Res BW 20 kHz

#VBW 200 kHz

Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 918.884 28 MHz | 16.71 dBm |
| 1Δ     | (1)   | Freq | 349.58 kHz     | 0.02 dB   |

Channel 23 to 24 Normal

Agilent

L

▲ Mkr1 350.31 kHz  
0.08 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 919.325 00 MHz

Span 700 kHz

#Res BW 20 kHz

#VBW 200 kHz

Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 919.153 56 MHz | 16.66 dBm |
| 1Δ     | (1)   | Freq | 350.31 kHz     | 0.08 dB   |

Channel 24 to 25 Normal

Agilent

L

▲ Mkr1 349.96 kHz  
0.01 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 919.675 00 MHz

Span 700 kHz

#Res BW 20 kHz

#VBW 200 kHz

Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 919.584 26 MHz | 16.74 dBm |
| 1Δ     | (1)   | Freq | 349.96 kHz     | 0.01 dB   |

Channel 25 to 26 Normal

Agilent

L

▲ Mkr1 349.97 kHz  
0.02 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 920.025 00 MHz

Span 700 kHz

#Res BW 20 kHz

#VBW 200 kHz

Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 919.854 24 MHz | 16.74 dBm |
| 1Δ     | (1)   | Freq | 349.97 kHz     | 0.02 dB   |

Channel 26 to 27 Normal

Agilent

L

▲ Mkr1 349.64 kHz  
-0.01 dB

Ref 35.5 dBm

Atten 40 dB

#Peak

Log

10

dB/

Offst

5.5

dB

LgAv

V1 S2

Center 920.375 00 MHz

Span 700 kHz

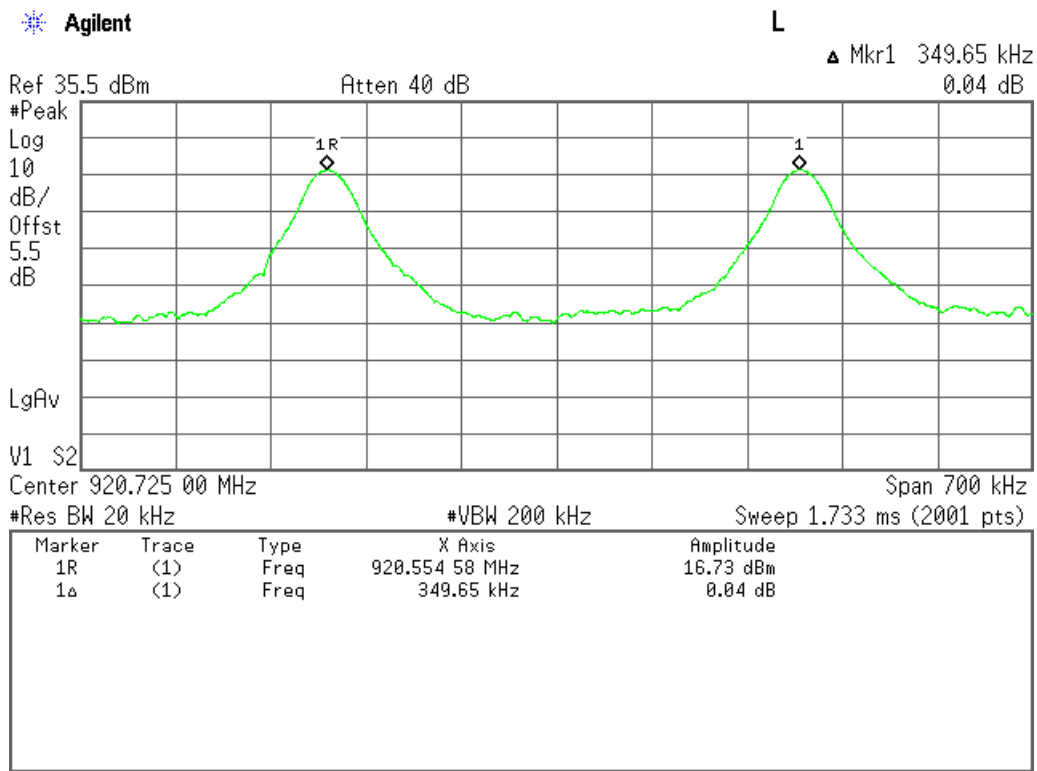
#Res BW 20 kHz

#VBW 200 kHz

Sweep 1.733 ms (2001 pts)

| Marker | Trace | Type | X Axis         | Amplitude |
|--------|-------|------|----------------|-----------|
| 1R     | (1)   | Freq | 920.204 23 MHz | 16.75 dBm |
| 1Δ     | (1)   | Freq | 349.64 kHz     | -0.01 dB  |

Channel 27 to 28 Normal



Channel 28 (Normal) to Channel 15 (Walkie Talkie)

| TEST RESULT                       |                |          |        |
|-----------------------------------|----------------|----------|--------|
| Channel (Walkie Talkie)           | Measured value | Limit    | Result |
| #                                 | KHz            |          |        |
| 1 to 2                            | 349.61         | >20dB BW | Pass   |
| 2 to 3                            | 349.98         | >20dB BW | Pass   |
| 3 to 4                            | 349.6          | >20dB BW | Pass   |
| 4 to 5                            | 349.66         | >20dB BW | Pass   |
| 5 to 6                            | 349.68         | >20dB BW | Pass   |
| 6 to 7                            | 349.7          | >20dB BW | Pass   |
| 7 to 8                            | 349.71         | >20dB BW | Pass   |
| 8 to 9                            | 349.73         | >20dB BW | Pass   |
| 9 to 10                           | 349.74         | >20dB BW | Pass   |
| 10 to 11                          | 349.76         | >20dB BW | Pass   |
| 11 to 12                          | 349.78         | >20dB BW | Pass   |
| 12 to 13                          | 349.8          | >20dB BW | Pass   |
| 13 to 14                          | 1350           | >20dB BW | Pass   |
| 28 (Normal) to 15 (Walkie Talkie) | 349.65         | >20dB BW | Pass   |
| 15 to 16                          | 1350           | >20dB BW | Pass   |
| 16 to 17                          | 349.72         | >20dB BW | Pass   |
| 17 to 18                          | 349.73         | >20dB BW | Pass   |
| 18 to 19                          | 349.4          | >20dB BW | Pass   |
| 19 to 20                          | 349.78         | >20dB BW | Pass   |
| 20 to 21                          | 349.79         | >20dB BW | Pass   |
| 21 to 22                          | 349.46         | >20dB BW | Pass   |
| 22 to 23                          | 349.83         | >20dB BW | Pass   |
| 23 to 24                          | 349.85         | >20dB BW | Pass   |
| 24 to 25                          | 349.52         | >20dB BW | Pass   |
| 25 to 26                          | 349.89         | >20dB BW | Pass   |
| 26 to 27                          | 349.91         | >20dB BW | Pass   |
| 27 to 28                          | 349.93         | >20dB BW | Pass   |
| Channel (Normal)                  | Measured value | Limit    | Result |
| #                                 | KHz            |          |        |
| 1 to 2                            | 349.89         | >20dB BW | Pass   |
| 2 to 3                            | 349.55         | >20dB BW | Pass   |
| 3 to 4                            | 349.57         | >20dB BW | Pass   |
| 4 to 5                            | 349.59         | >20dB BW | Pass   |
| 5 to 6                            | 349.61         | >20dB BW | Pass   |
| 6 to 7                            | 349.63         | >20dB BW | Pass   |
| 7 to 8                            | 349.65         | >20dB BW | Pass   |
| 8 to 9                            | 350.02         | >20dB BW | Pass   |
| 9 to 10                           | 349.68         | >20dB BW | Pass   |
| 10 to 11                          | 349.70         | >20dB BW | Pass   |
| 11 to 12                          | 349.73         | >20dB BW | Pass   |
| 12 to 13                          | 350.10         | >20dB BW | Pass   |
| 13 to 14                          | 350.13         | >20dB BW | Pass   |
| 14 to 15                          | 2349           | >20dB BW | Pass   |
| 15 to 16                          | 349.79         | >20dB BW | Pass   |
| 16 to 17                          | 350.13         | >20dB BW | Pass   |
| 17 to 18                          | 349.76         | >20dB BW | Pass   |
| 18 to 19                          | 349.51         | >20dB BW | Pass   |
| 19 to 20                          | 349.52         | >20dB BW | Pass   |
| 20 to 21                          | 349.54         | >20dB BW | Pass   |

|          |        |          |      |
|----------|--------|----------|------|
| 21 to 22 | 350.26 | >20dB BW | Pass |
| 22 to 23 | 349.56 | >20dB BW | Pass |
| 23 to 24 | 349.58 | >20dB BW | Pass |
| 24 to 25 | 350.31 | >20dB BW | Pass |
| 25 to 26 | 349.96 | >20dB BW | Pass |
| 26 to 27 | 349.97 | >20dB BW | Pass |
| 27 to 28 | 349.64 | >20dB BW | Pass |
|          |        |          |      |

**TEST SETUP PHOTOGRAPH**

Refer Annexure -1

**Conducted RF Test setup**

## 2.4 NUMBER OF HOPPING FREQUENCIES

|                       |                                           |                  |         |
|-----------------------|-------------------------------------------|------------------|---------|
| EUT Nomenclature      | Wireless Relay Module                     | Test Request No. | 20294-1 |
| Model No.             | FW-RM                                     | Serial No.       | MEL-159 |
| Test Start Date       | 2017-04-22                                | Temperature (°C) | 23.6°C  |
| Test End Date         | 2017-04-24                                | Humidity RH (%)  | 51.9%RH |
| Tested By             | Arnoldo Garcia                            | Pressure (mbar)  | NR      |
| Input Voltage / Freq. | 3.3 Vdc                                   |                  |         |
| Operating Mode        | Refer Page 5 for Operating Mode Table     |                  |         |
| Test configuration    | Refer Page 5 for Test Configuration Table |                  |         |
| Deviation from Std.   | NA                                        |                  |         |
| Applicable standard   | FCC Part 15.247:2010                      |                  |         |
| Test Method           | DA 00-705                                 |                  |         |
| Comment               | NA                                        |                  |         |

### TEST DETAILS

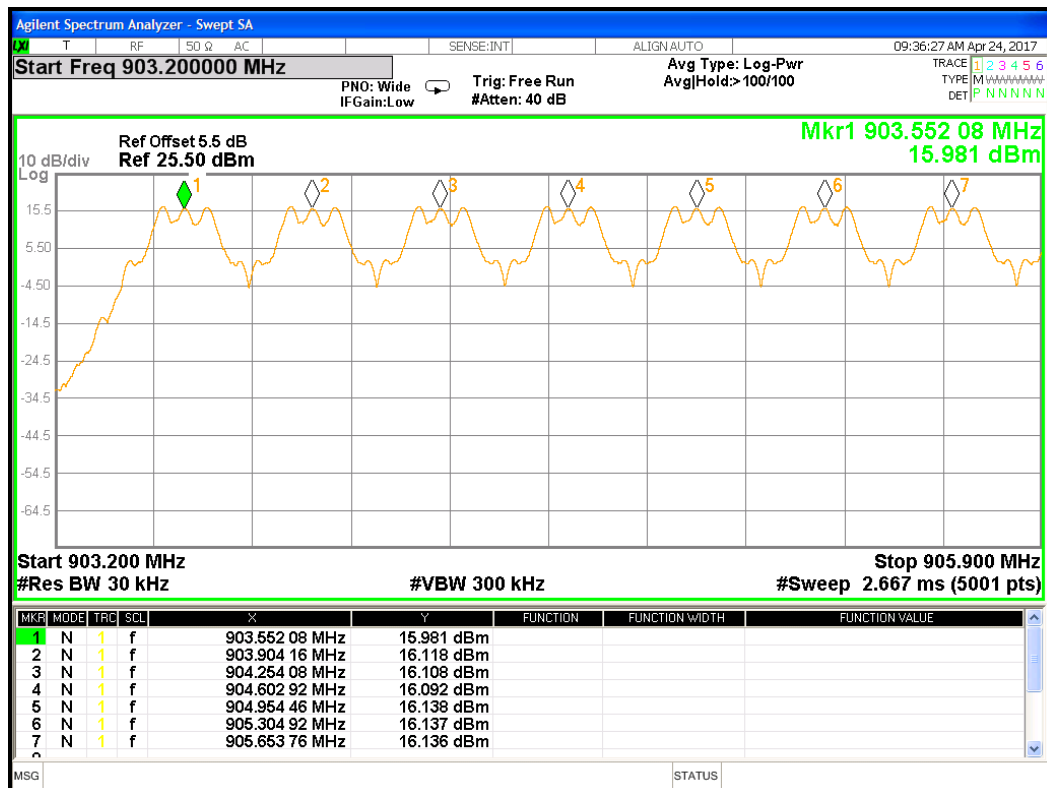
|        |                                   |                                               |
|--------|-----------------------------------|-----------------------------------------------|
| Method | Radiated <input type="checkbox"/> | Conducted <input checked="" type="checkbox"/> |
|--------|-----------------------------------|-----------------------------------------------|

### TEST PARAMETERS

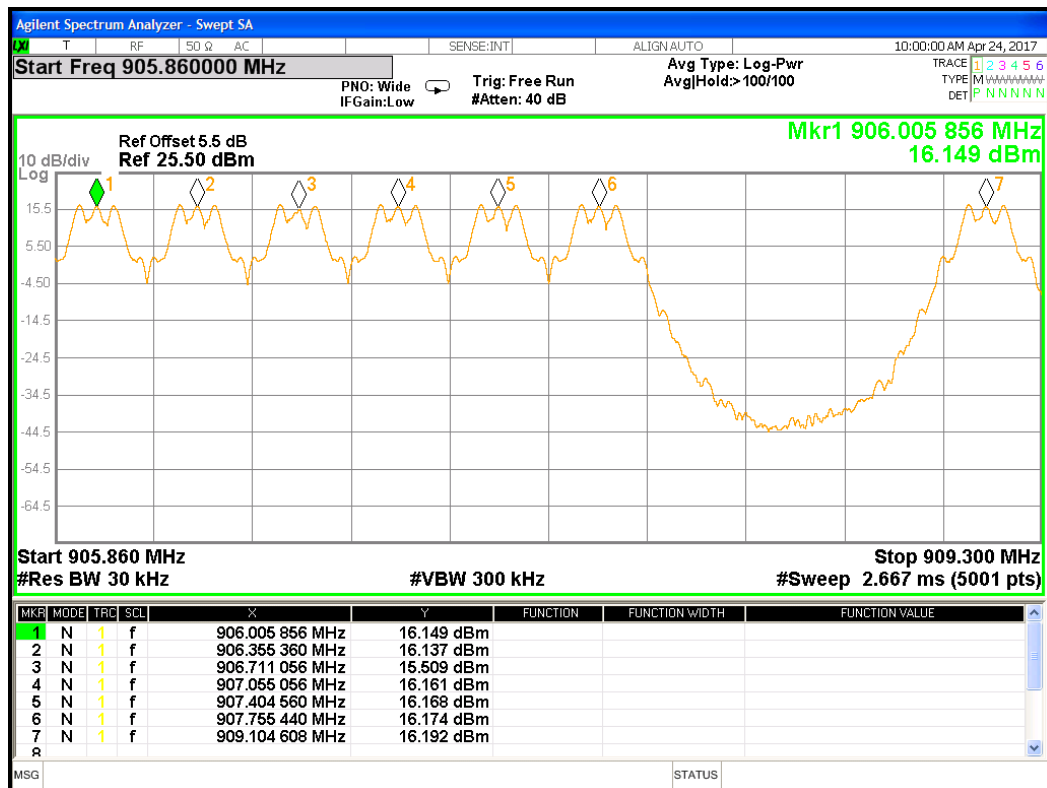
|                 |    |                      |    |
|-----------------|----|----------------------|----|
| Antenna Height  | NA | Turntable Rotation   | NA |
| Equipment Class | NA | Measurement Distance | NA |

### TEST EQUIPMENT

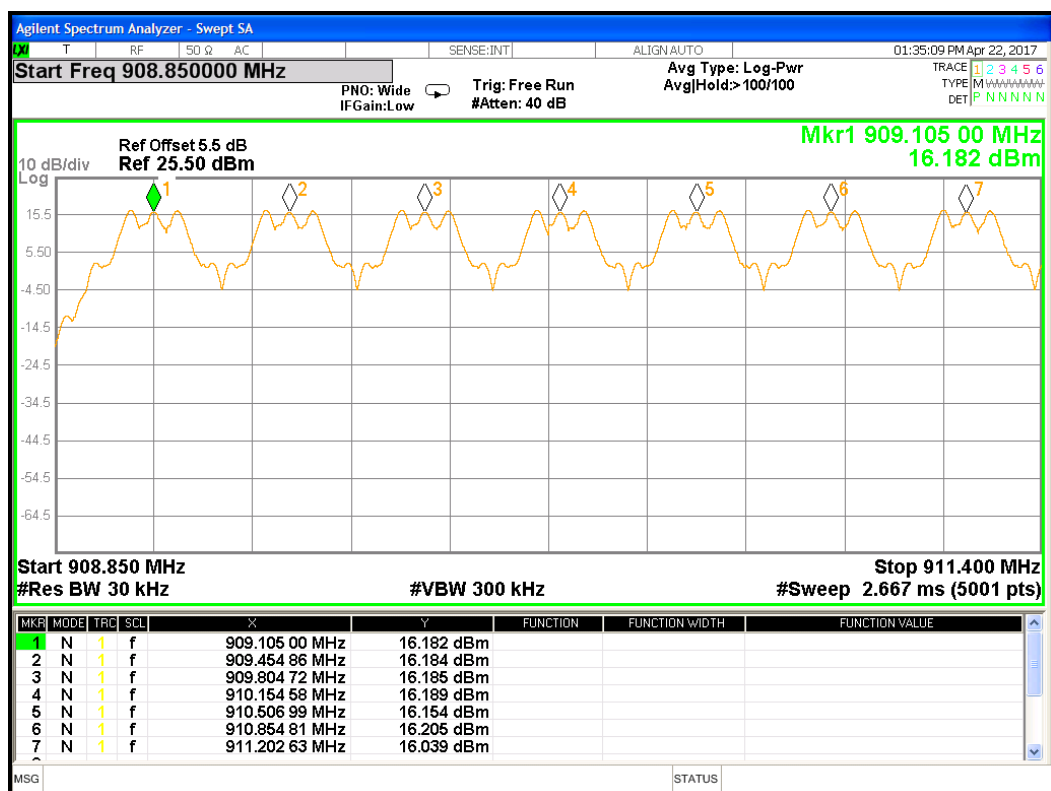
| Y/N | Equipment         | Make     | Model        | Serial Number | Cal Due Date |
|-----|-------------------|----------|--------------|---------------|--------------|
| Y   | Spectrum Analyzer | Keysight | N9030A (PXA) | MY49431595    | 2018-01-27   |
| Y   | RF Cable          | Digikey  | 1            | NA            | NA           |



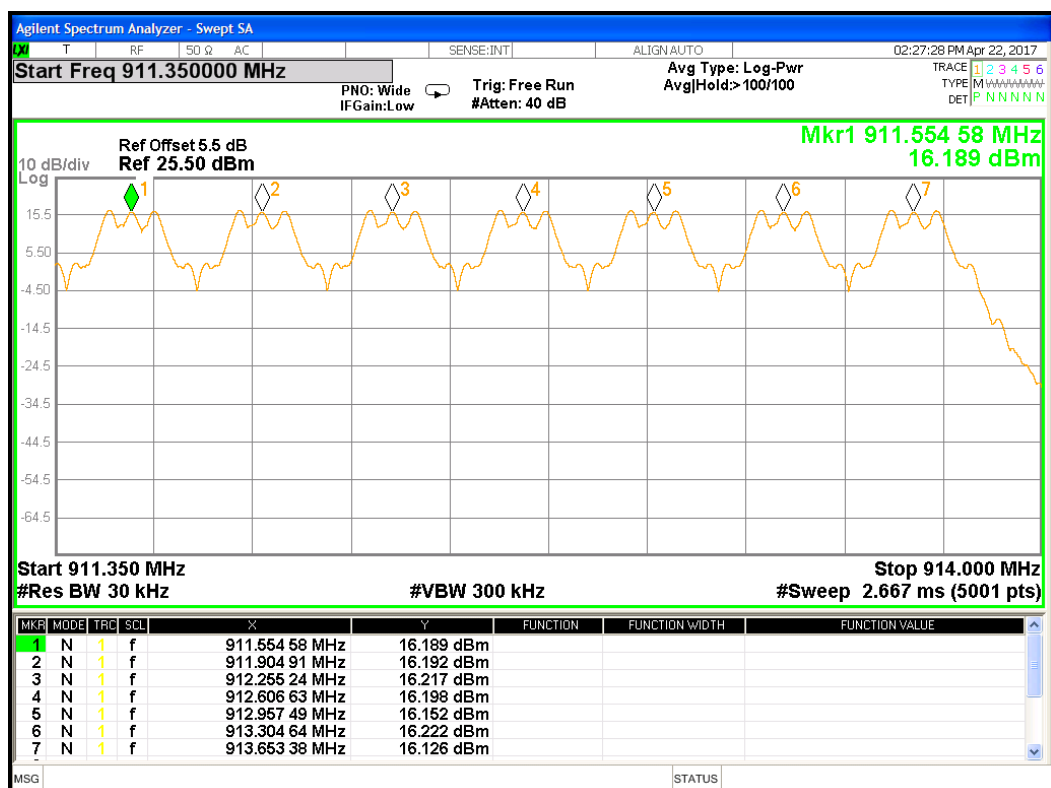
Channels 1-7 (Walkie-Talkie Mode)



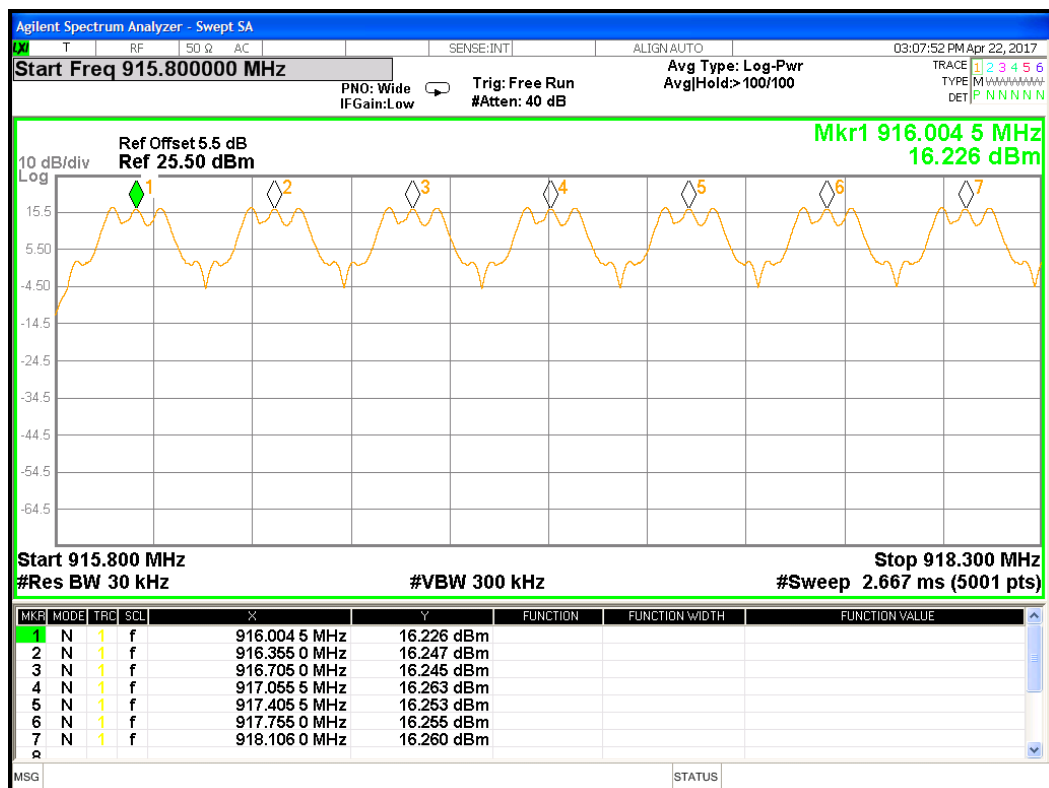
Channels 8-14 (Walkie-Talkie Mode)



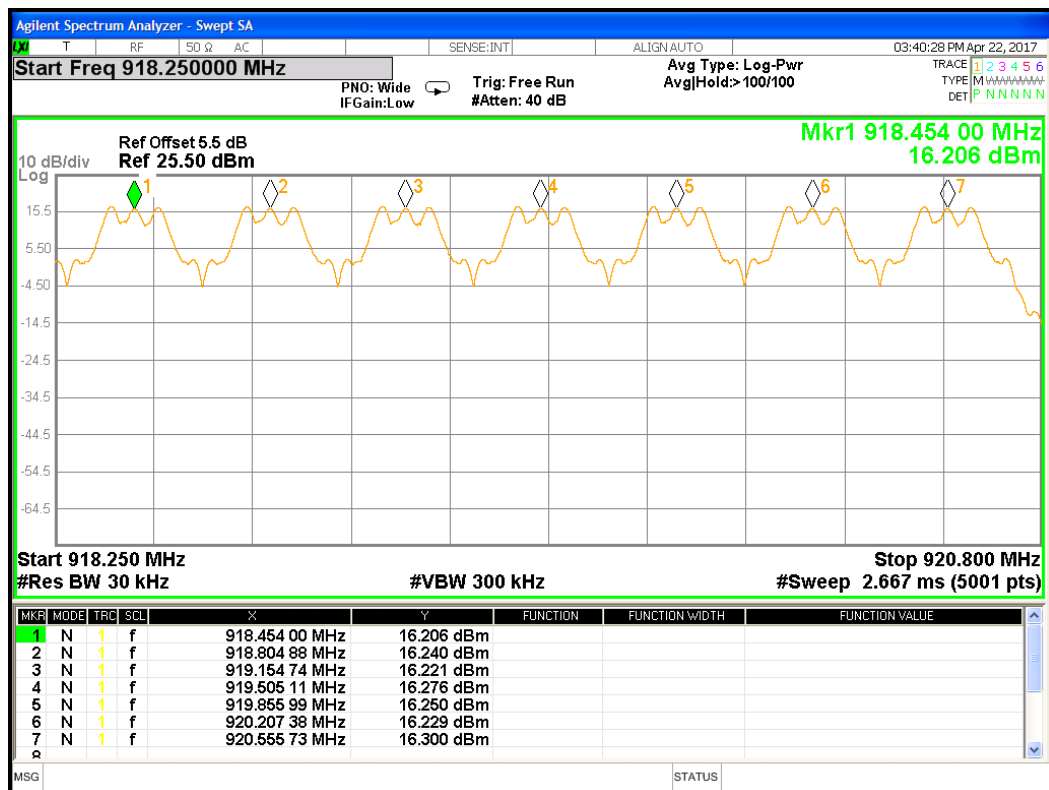
Channels 1-7 (Normal Mode)



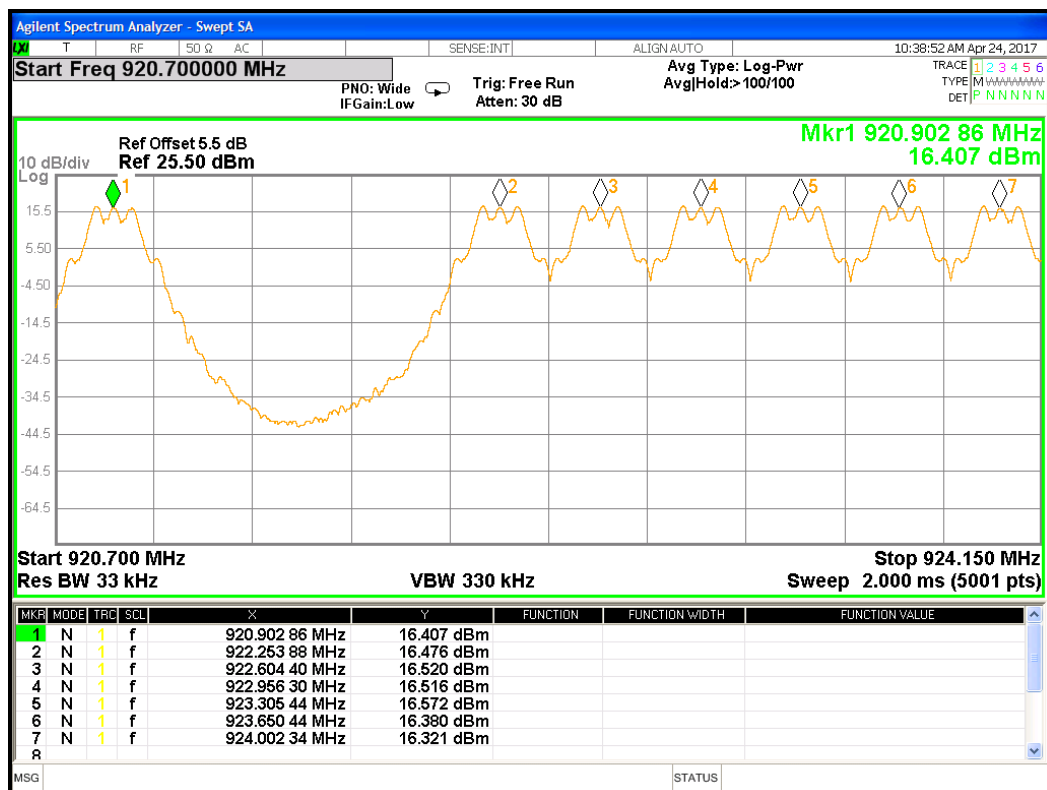
Channels 8-14 (Normal Mode)



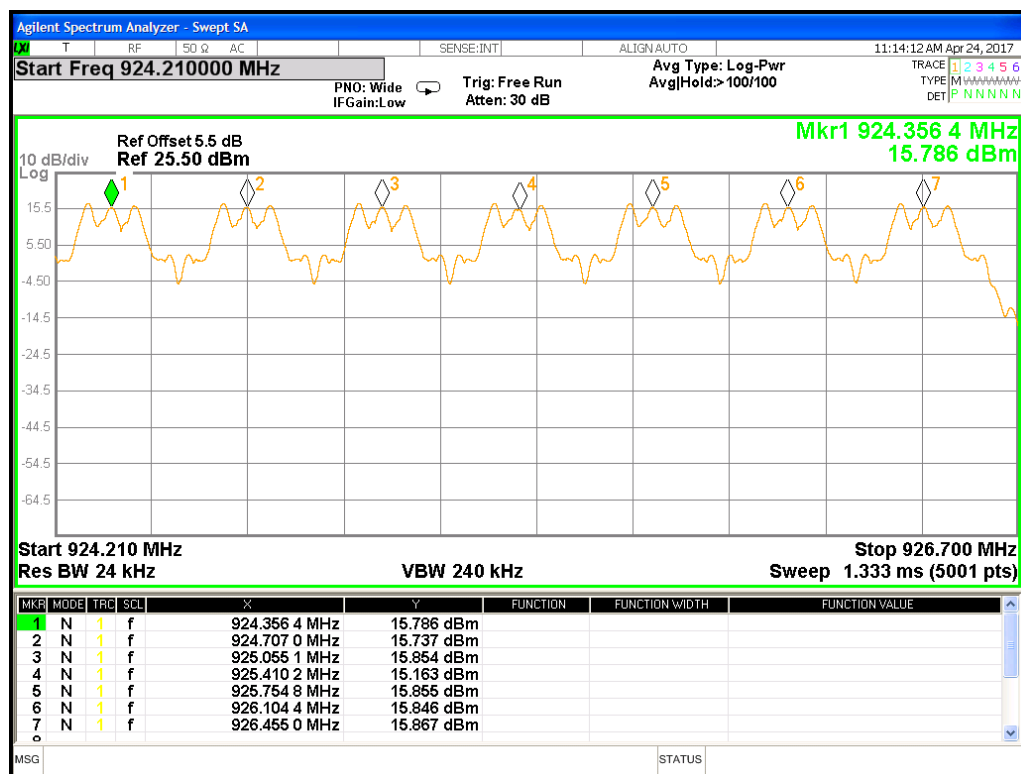
Channels 15-21 (Normal Mode)



Channels 22-28 (Normal Mode)



Channels 15-21 (Walkie-Talkie Mode)



Channels 22-27 (Walkie-Talkie Mode)

| TEST RESULT        |                          |                         |              |
|--------------------|--------------------------|-------------------------|--------------|
| Mode of Operation  | No. of Channels Measured | Limit (No. of Channels) | Test Results |
| Normal Mode        | 28                       | ≥25                     | PASS         |
| Walkie-Talkie Mode | 27                       | ≥25                     | PASS         |

**TEST SETUP PHOTOGRAPH**

Refer Annexure -1

**Conducted RF Test setup**

## 2.5 BAND-EDGE COMPLIANCE

|                       |                                           |                  |         |
|-----------------------|-------------------------------------------|------------------|---------|
| EUT Nomenclature      | Wireless Relay Module                     | Test Request No. | 20294-1 |
| Model No.             | FW-RM                                     | Serial No.       | MEL-159 |
| Test Start Date       | 2016-08-31                                | Temperature (°C) | 23.6°C  |
| Test End Date         | 2016-09-06                                | Humidity RH (%)  | 51.9%RH |
| Tested By             | Jose Badia/Arnoldo Garcia                 | Pressure (mbar)  | NR      |
| Input Voltage / Freq. | 3.3 Vdc                                   |                  |         |
| Operating Mode        | Refer Page 5 for Operating Mode Table     |                  |         |
| Test configuration    | Refer Page 5 for Test Configuration Table |                  |         |
| Deviation from Std.   | NA                                        |                  |         |
| Applicable standard   | FCC Part 15.247:2010                      |                  |         |
| Test Method           | DA 00-705                                 |                  |         |
| Comment               | NA                                        |                  |         |

### TEST DETAILS

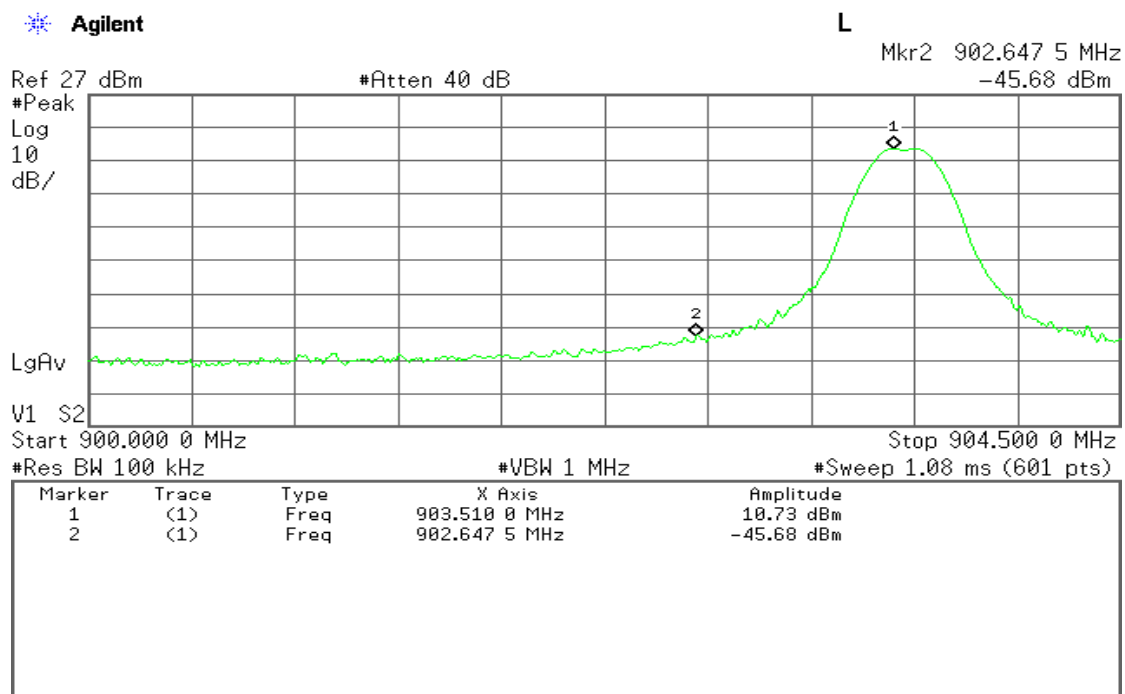
|        |                                   |                                               |
|--------|-----------------------------------|-----------------------------------------------|
| Method | Radiated <input type="checkbox"/> | Conducted <input checked="" type="checkbox"/> |
|--------|-----------------------------------|-----------------------------------------------|

### TEST PARAMETERS

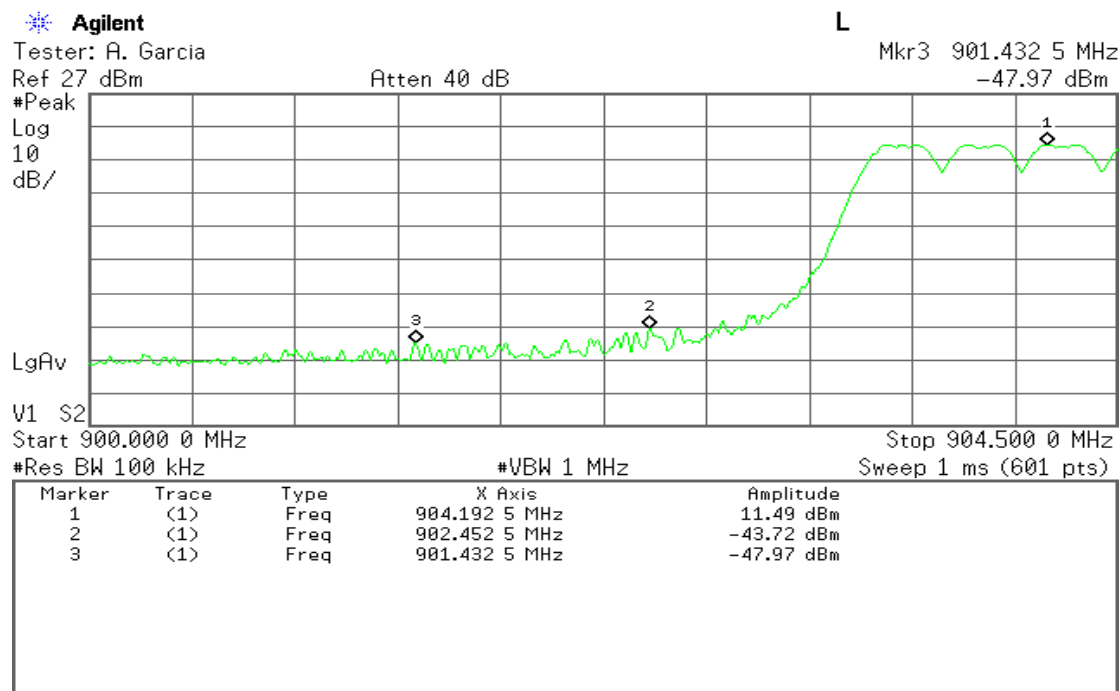
|                 |    |                      |    |
|-----------------|----|----------------------|----|
| Antenna Height  | NA | Turntable Rotation   | NA |
| Equipment Class | NA | Measurement Distance | NA |

### TEST EQUIPMENT

| Y/N | Equipment         | Make    | Model  | Serial Number | Cal Due Date |
|-----|-------------------|---------|--------|---------------|--------------|
| Y   | Spectrum Analyzer | Agilent | E4440A | MY41000078    | 2017-05-18   |
| Y   | RF Cable          | Digikey | 1      | NA            | NA           |



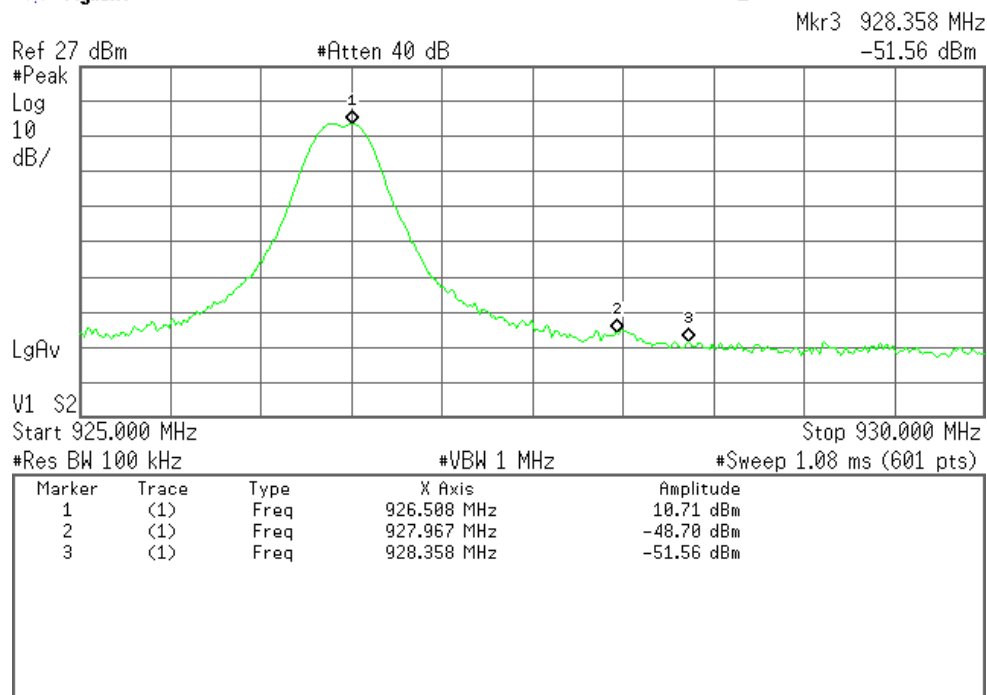
Channel 1 902MHz (903.55MHz)



Channel 1 902MHz (Hopping Enabled)

Agilent

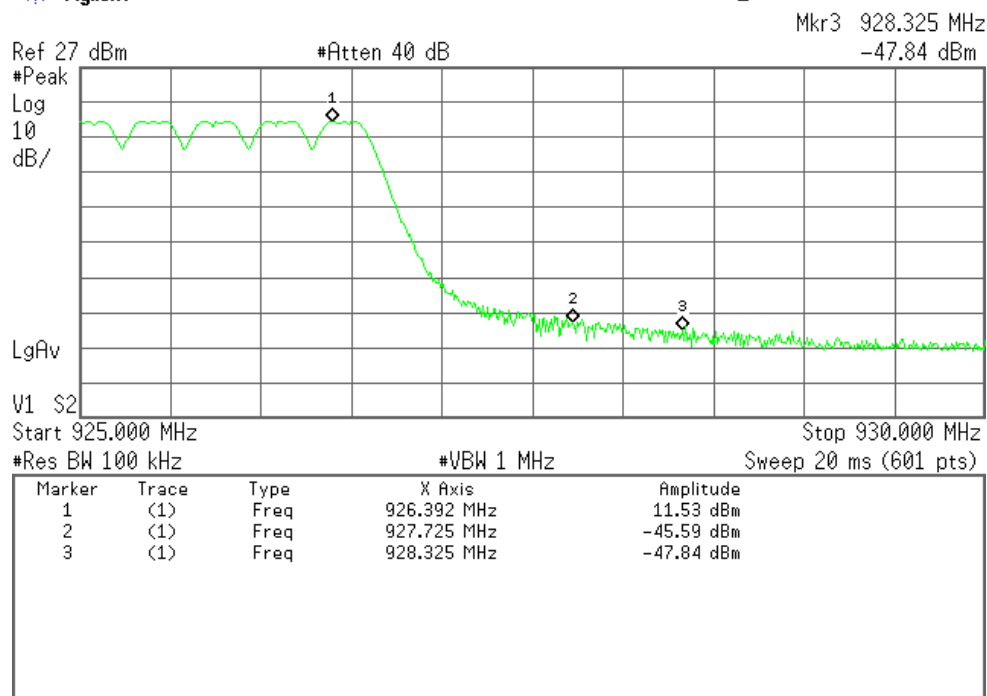
L



Channel 55 at 928MHz (926.45MHz)

Agilent

L



Channel 55 928MHz (Hopping Enabled)

| TEST RESULT |           |                     |              |       |              |
|-------------|-----------|---------------------|--------------|-------|--------------|
| Channel     | Frequency | Measured difference |              | Limit | Test Results |
| #           | MHz       | SINGLE CHANNEL      | FHSS ENABLED | dBc   |              |
| 1           | 903.355   | 56.41               | 55.21        | >20   | PASS         |
| 55          | 926.45    | 59.41               | 57.12        | >20   | PASS         |

| TEST SETUP PHOTOGRAPH                                         |
|---------------------------------------------------------------|
| <p>Refer Annexure -1</p> <p><b>Conducted RFTest setup</b></p> |

**2.6 TIME OF OCCUPANCY (DWELL TIME)**

|                              |                                           |                         |         |
|------------------------------|-------------------------------------------|-------------------------|---------|
| <b>EUT Nomenclature</b>      | Wireless Relay Module                     | <b>Test Request No.</b> | 20294-1 |
| <b>Model No.</b>             | FW-RM                                     | <b>Serial No.</b>       | MEL-159 |
| <b>Test Start Date</b>       | 2016-09-07                                | <b>Temperature (°C)</b> | 23.6°C  |
| <b>Test End Date</b>         | 2016-09-07                                | <b>Humidity RH (%)</b>  | 51.9%RH |
| <b>Tested By</b>             | Jose Badia/Arnoldo Garcia                 | <b>Pressure (mbar)</b>  | NR      |
| <b>Input Voltage / Freq.</b> | 3.3 Vdc                                   |                         |         |
| <b>Operating Mode</b>        | Refer Page 5 for Operating Mode Table     |                         |         |
| <b>Test configuration</b>    | Refer Page 5 for Test Configuration Table |                         |         |
| <b>Deviation from Std.</b>   | NA                                        |                         |         |
| <b>Applicable standard</b>   | FCC Part 15.247:2010                      |                         |         |
| <b>Test Method</b>           | DA 00-705                                 |                         |         |
| <b>Comment</b>               | NA                                        |                         |         |

**TEST DETAILS**

|               |                                   |                                               |
|---------------|-----------------------------------|-----------------------------------------------|
| <b>Method</b> | Radiated <input type="checkbox"/> | Conducted <input checked="" type="checkbox"/> |
|---------------|-----------------------------------|-----------------------------------------------|

**TEST PARAMETERS**

|                        |    |                             |    |
|------------------------|----|-----------------------------|----|
| <b>Antenna Height</b>  | NA | <b>Turntable Rotation</b>   | NA |
| <b>Equipment Class</b> | NA | <b>Measurement Distance</b> | NA |

**TEST EQUIPMENT**

| Y/N | Equipment         | Make    | Model  | Serial Number | Cal Due Date |
|-----|-------------------|---------|--------|---------------|--------------|
| Y   | Spectrum Analyzer | Agilent | E4440A | MY41000078    | 2017-05-18   |
| Y   | RF Cable          | Digikey | 1      | NA            | NA           |

Agilent

L

Ref 25 dBm

Atten 40 dB

▲ Mkr1 1.575 ms  
-0.98 dB

#Peak

Log

10

dB/

LgAv

V1 S2

Center 916.000 MHz

Span 0 Hz

Res BW 1 MHz

#VBW 3 MHz

Sweep 2.933 ms (4001 pts)

| Marker | Trace | Type | X Axis        | Amplitude |
|--------|-------|------|---------------|-----------|
| 1R     | (1)   | Time | 42.53 $\mu$ s | 7.45 dBm  |
| 1▲     | (1)   | Time | 1.575 ms      | -0.98 dB  |
| 2R     | (1)   | Time | 42.53 $\mu$ s | 7.45 dBm  |
| 2▲     | (1)   | Time | 2.82 ms       | 0.01 dB   |

Channel 28(916MHz)

## TEST RESULT

| Channel | Channel Frequency | Measured DwellTime | No. of Bursts | Time of Occupancy in 10sec | Limit in 10s period | Results |
|---------|-------------------|--------------------|---------------|----------------------------|---------------------|---------|
| #       | MHz               | ms                 | #             | ms                         | ms                  |         |
| 28      | 916               | 1.575              | 15            | 23.625                     | ≤ 400               | PASS    |

## TEST SETUP PHOTOGRAPHS

Refer Annexure -1

Conducted RF Test setup

## 2.7 SPURIOUS RF CONDUCTED EMISSIONS

|                       |                                           |                  |         |
|-----------------------|-------------------------------------------|------------------|---------|
| EUT Nomenclature      | Wireless Relay Module                     | Test Request No. | 20294-1 |
| Model No.             | FW-RM                                     | Serial No.       | MEL-159 |
| Test Start Date       | 2017-04-19                                | Temperature (°C) | 23.6°C  |
| Test End Date         | 2017-04-19                                | Humidity RH (%)  | 51.9%RH |
| Tested By             | Jose Badia                                | Pressure (mbar)  | NR      |
| Input Voltage / Freq. | 3.3 Vdc                                   |                  |         |
| Operating Mode        | Refer Page 5 for Operating Mode Table     |                  |         |
| Test configuration    | Refer Page 5 for Test Configuration Table |                  |         |
| Deviation from Std.   | NA                                        |                  |         |
| Applicable standard   | FCC Part 15.247:2010                      |                  |         |
| Test Method           | DA 00-705                                 |                  |         |
| Comment               | NA                                        |                  |         |

### TEST DETAILS

|        |                                   |                                               |
|--------|-----------------------------------|-----------------------------------------------|
| Method | Radiated <input type="checkbox"/> | Conducted <input checked="" type="checkbox"/> |
|--------|-----------------------------------|-----------------------------------------------|

### TEST PARAMETERS

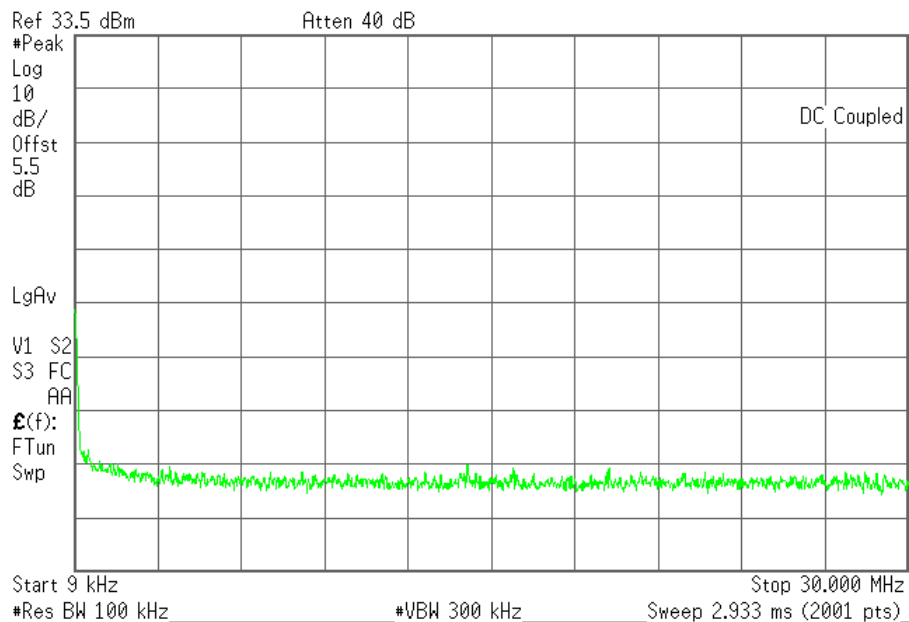
|                 |    |                      |    |
|-----------------|----|----------------------|----|
| Antenna Height  | NA | Turntable Rotation   | NA |
| Equipment Class | NA | Measurement Distance | NA |

### TEST EQUIPMENT

| Y/N | Equipment         | Make    | Model  | Serial Number | Cal Due Date |
|-----|-------------------|---------|--------|---------------|--------------|
| Y   | Spectrum Analyzer | Agilent | E4440A | MY41000078    | 2017-05-18   |
| Y   | RF Cable          | Digikey | 1      | NA            | NA           |

Agilent

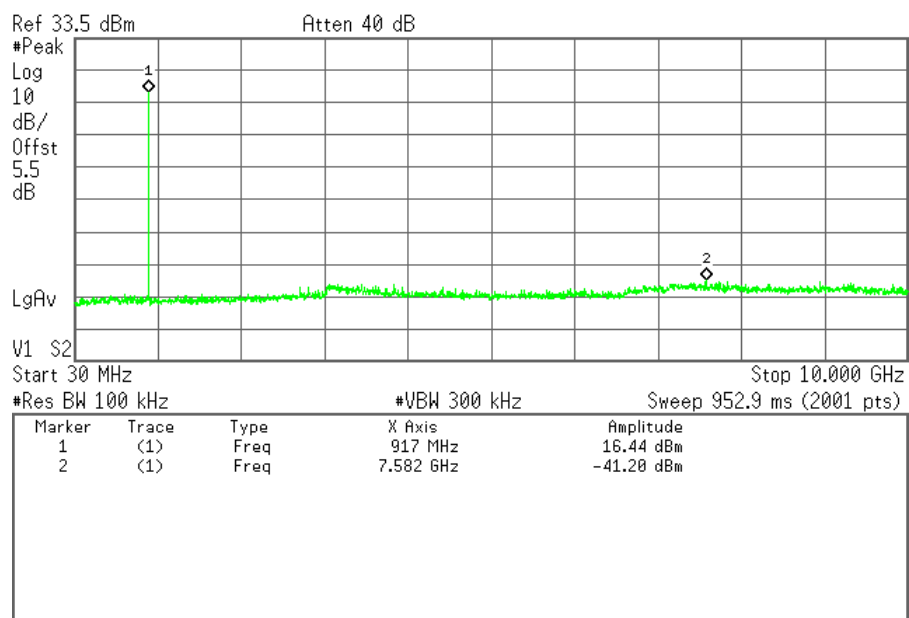
L



Channel 28 (916MHz) – 9kHz to 30MHz

Agilent

L



Channel 28 (916MHz) – 30MHz to 10GHz

| TEST RESULT |                   |                     |             |       |        |
|-------------|-------------------|---------------------|-------------|-------|--------|
| Channel     | Channel Frequency | Measured Parameters |             | Limit | Result |
| #           | MHz               | Frequency (GHz)     | Level (dBm) | dBc   |        |
| 28          | 916               | 7.582               | -41.2       | >20   | PASS   |
|             |                   |                     |             |       |        |

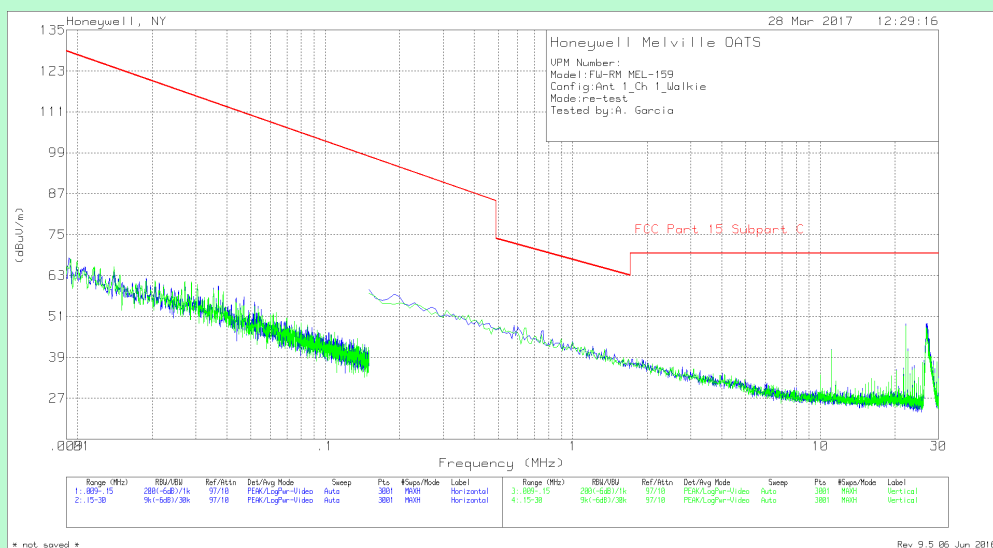
| TEST SETUP PHOTOGRAPH                                          |
|----------------------------------------------------------------|
| <p>Refer Annexure -1</p> <p><b>Conducted RF Test setup</b></p> |

## 2.8 SPURIOUS RADIATED EMISSIONS

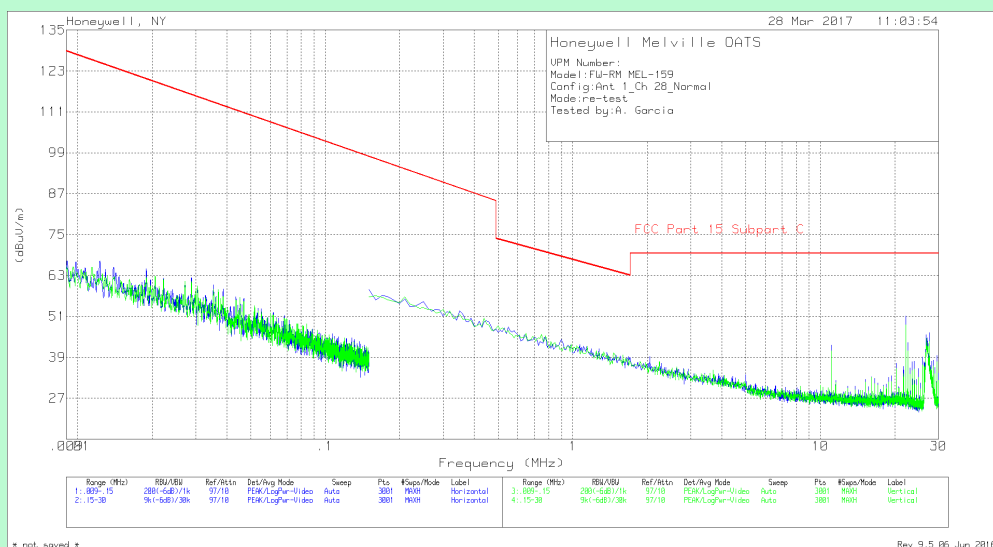
|                              |                                              |                                    |             |
|------------------------------|----------------------------------------------|------------------------------------|-------------|
| <b>EUT Nomenclature</b>      | Wireless Relay Module                        | <b>Test Request No.</b>            | 20294-1     |
| <b>Model No.</b>             | FW-RM                                        | <b>Serial No.</b>                  | MEL-159     |
| <b>Test Start Date</b>       | 2016-09-22                                   | <b>Temperature (°C)</b>            | 0°C-35°C    |
| <b>Test End Date</b>         | 2017-03-28                                   | <b>Humidity RH (%)</b>             | 10%RH-90%RH |
| <b>Tested By</b>             | Jose Badia/Arnoldo Garcia/Chris Locke        | <b>Pressure (mbar)</b>             | NR          |
| <b>Input Voltage / Freq.</b> | 3.3 Vdc                                      |                                    |             |
| <b>Operating Mode</b>        | Refer Page 5 for Operating Mode Table        |                                    |             |
| <b>Test configuration</b>    | Refer Page 5 for Test Configuration Table    |                                    |             |
| <b>Deviation from Std.</b>   | NA                                           |                                    |             |
| <b>Applicable standard</b>   | FCC Part 15.247 : 2010 & 15.209 : 2010       |                                    |             |
| <b>Test Method</b>           | ANSI 63.10 - 2013                            |                                    |             |
| <b>Comment</b>               | NA                                           |                                    |             |
| <b>TEST DETAILS</b>          |                                              |                                    |             |
| <b>Method</b>                | Radiated <input checked="" type="checkbox"/> | Conducted <input type="checkbox"/> |             |
| <b>TEST PARAMETERS</b>       |                                              |                                    |             |
| <b>Antenna Height</b>        | 1m to 4m                                     | <b>Turntable Rotation</b>          | 0° to 360°  |
| <b>Equipment Class</b>       | NA                                           | <b>Measurement Distance</b>        | 3m          |

| TEST EQUIPMENT                                                                                                            |                           |                 |            |            |              |
|---------------------------------------------------------------------------------------------------------------------------|---------------------------|-----------------|------------|------------|--------------|
| Y/N                                                                                                                       | Equipment                 | Make            | Model      | Sl. No.    | Cal Due Date |
| Y                                                                                                                         | Spectrum Analyzer         | Rohde & Schwarz | FSW26      | 103125     | 2018-02-14   |
| Y                                                                                                                         | Spectrum Analyzer         | Rohde & Schwarz | FSU26      | 100303     | 2017-03-31   |
| Y                                                                                                                         | Bilog Antenna             | Sunol           | JB6        | A012816    | 2018-03-09   |
| Y                                                                                                                         | Bilog Antenna             | Sunol           | JB5        | A022406    | 2017-12-18   |
| Y                                                                                                                         | Horn Antenna              | EMCO            | RGA-60     | 3127       | 2017-02-03   |
| Y                                                                                                                         | Preamplifier (Below 1GHz) | HP              | 8447D      | 2443AUF555 | NA           |
| Y                                                                                                                         | Preamplifier (Above 1GHz) | Amplical        | AMP1G18-35 | 160362     | NA           |
| Y                                                                                                                         | Active Loop Antenna       | Com-Power       | AL-130R    | 121080     | 2017-08-15   |
|                                                                                                                           |                           |                 |            |            |              |
|                                                                                                                           |                           |                 |            |            |              |
|                                                                                                                           |                           |                 |            |            |              |
|                                                                                                                           |                           |                 |            |            |              |
| Note: Switch ON /OFF the Internal Preamplifier based on carrier level and or noise floor without overloading the receiver |                           |                 |            |            |              |

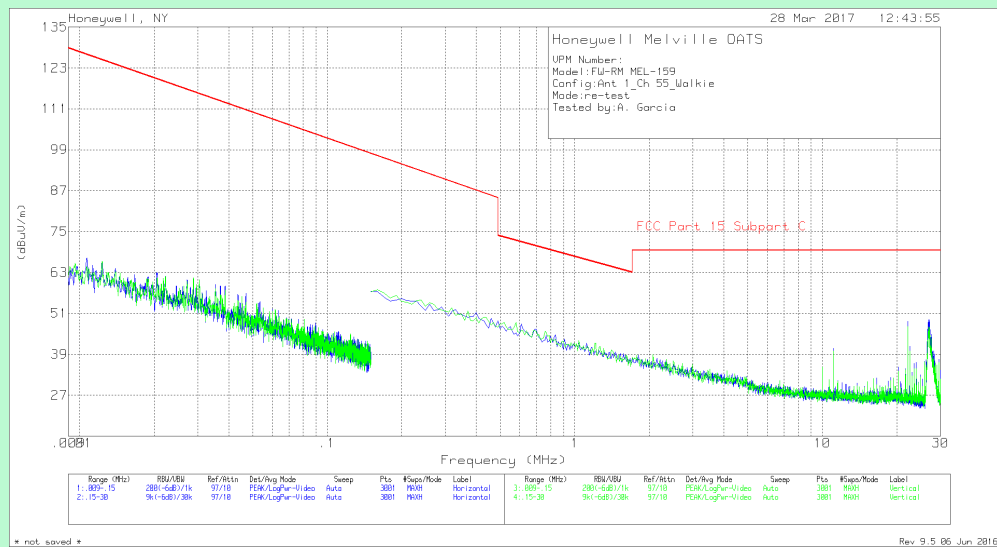
## TEST GRAPHS – 9 KHz to 30 MHz (ANTENNA 1)



Channel 1 (903.55 MHz) – Antenna 1



Channel 28 (916.00 MHz) – Antenna 1

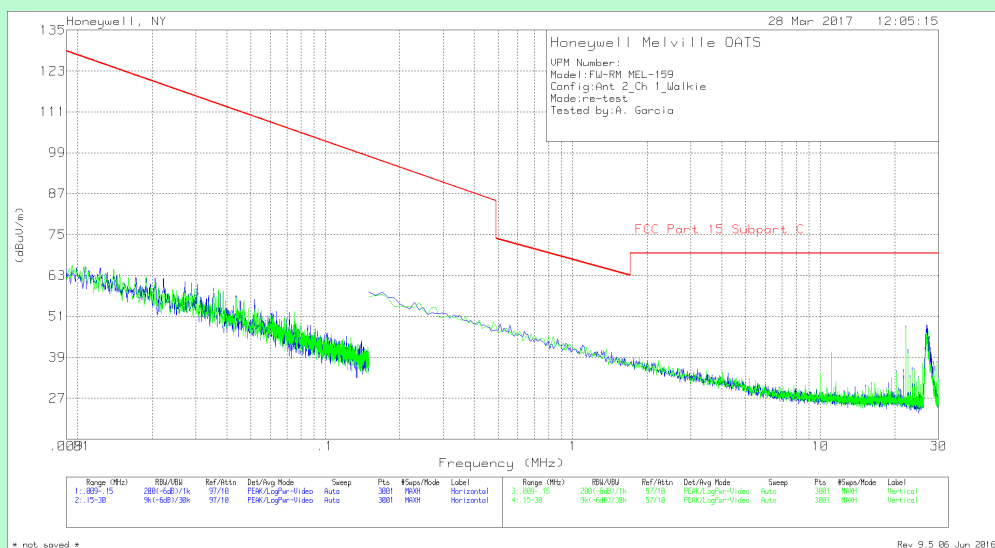


Channel 55 (926.45 MHz) – Antenna 1

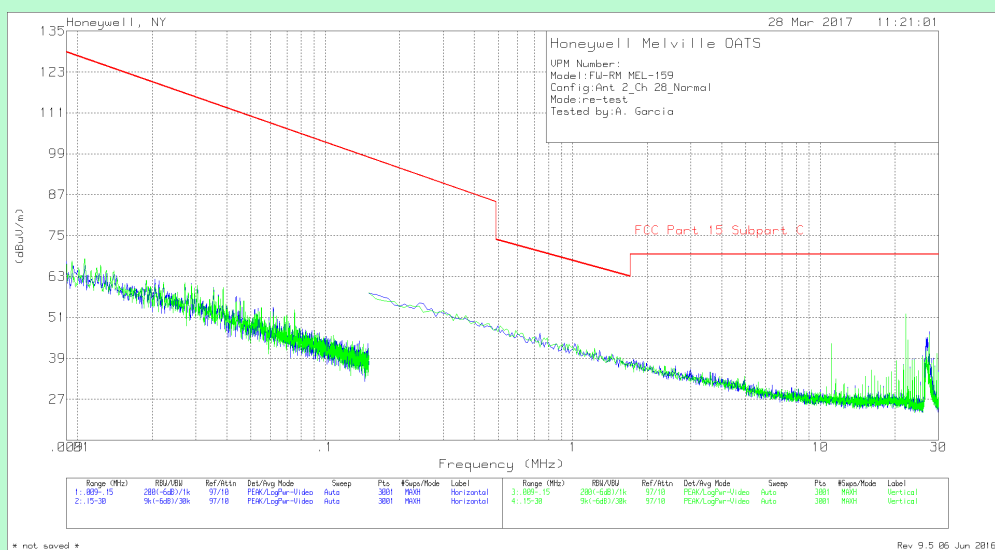
## TEST RESULT – 9 KHz to 30 MHz

| Channel                                                                                                                     | Channel Frequency | Measured Spurious | Quasi Peak | Height | Ant Pol                  | Azimuth | Margin | Limit @ 3m Distance | Results |
|-----------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------|------------|--------|--------------------------|---------|--------|---------------------|---------|
| #                                                                                                                           | MHz               | MHz               | dBµV/m     | cm     | Parallel / Perpendicular | deg     | dB     | dBµV/m              |         |
| No emissions detected that are a product of the transmitter. Emissions shown in the plot are related to the chamber ambient |                   |                   |            |        |                          |         |        |                     |         |
| <b>Note :</b> Measured Field Strength –dBuV/m = Receiver Readings (dBuV) + Antenna Factor (dB/m) + Cable loss (dB)          |                   |                   |            |        |                          |         |        |                     |         |

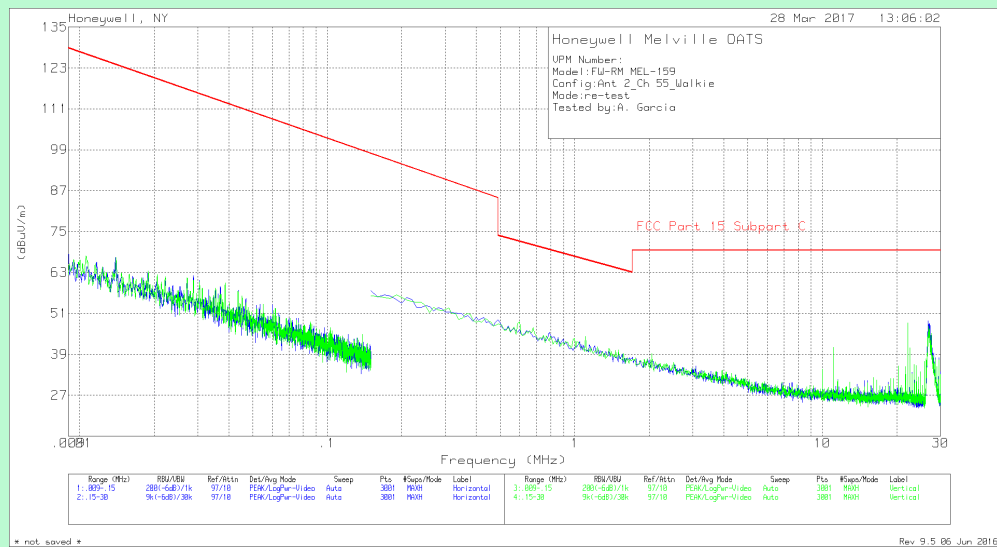
## TEST GRAPHS – 9 KHz to 30 MHz (ANTENNA 2)



Channel 1 (903.55 MHz) – Antenna 2



Channel 28 (916.00 MHz) – Antenna 2

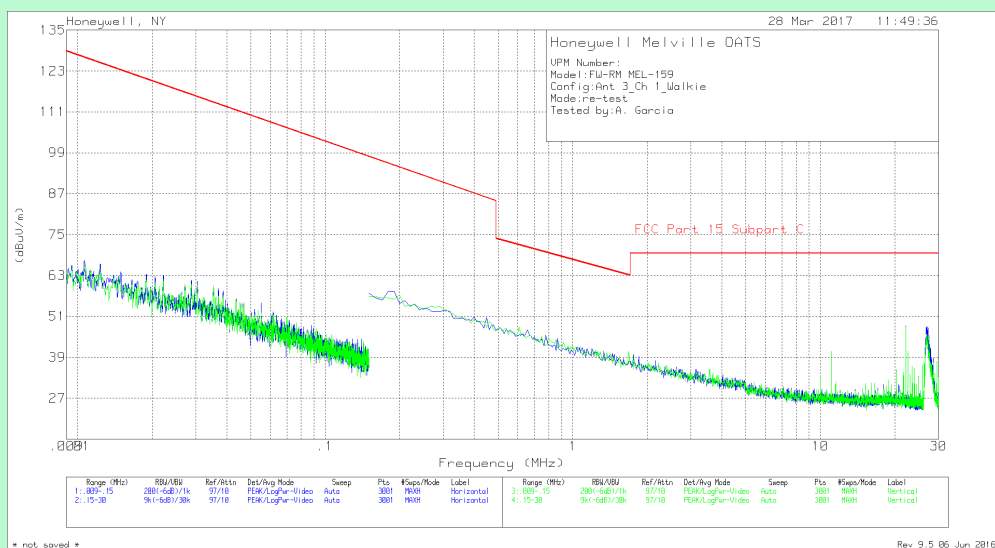


Channel 55 (926.45 MHz) – Antenna 2

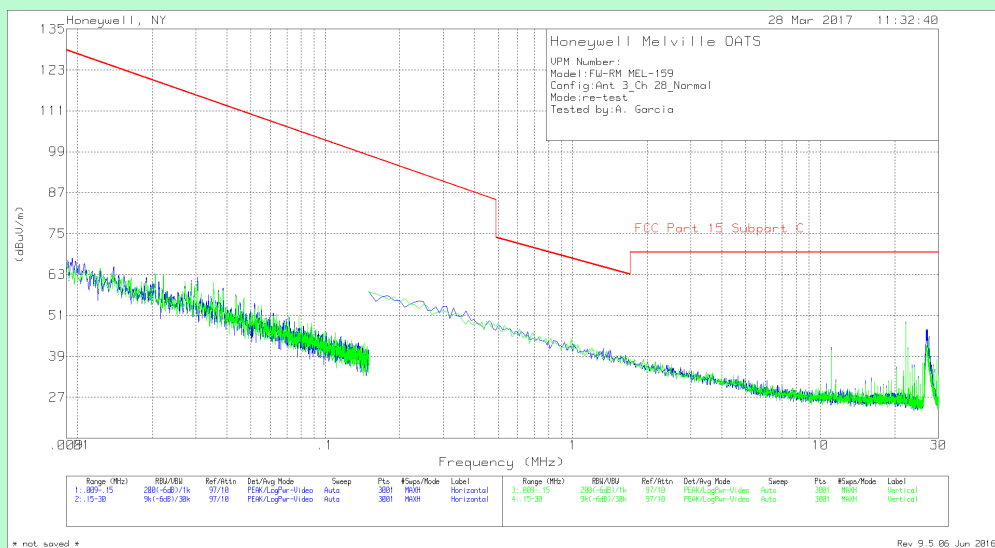
## TEST RESULT – 9 KHz to 30 MHz

| Channel                                                                                                                     | Channel Frequency | Measured Spurious | Quasi Peak | Height | Ant Pol                  | Azimuth | Margin | Limit @ 3m Distance | Results |
|-----------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------|------------|--------|--------------------------|---------|--------|---------------------|---------|
| #                                                                                                                           | MHz               | MHz               | dBµV/m     | cm     | Parallel / Perpendicular | deg     | dB     | dBµV/m              |         |
| No emissions detected that are a product of the transmitter. Emissions shown in the plot are related to the chamber ambient |                   |                   |            |        |                          |         |        |                     |         |
| <b>Note :</b> Measured Field Strength –dBuV/m = Receiver Readings (dBuV) + Antenna Factor (dB/m) + Cable loss (dB)          |                   |                   |            |        |                          |         |        |                     |         |

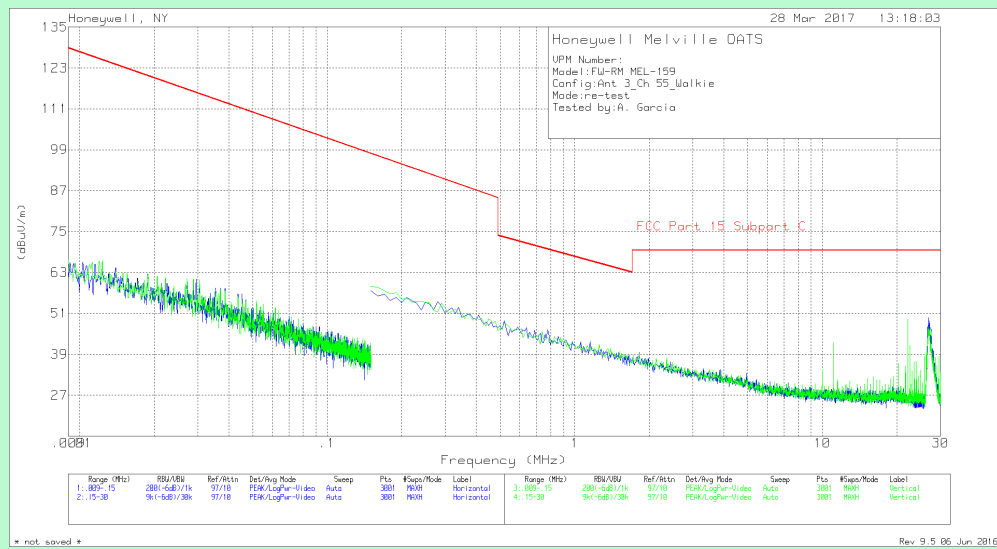
## TEST GRAPHS – 9 KHz to 30 MHz (ANTENNA 3)



Channel 1 (903.55 MHz) – Antenna 3



Channel 28 (916.00 MHz) – Antenna 3

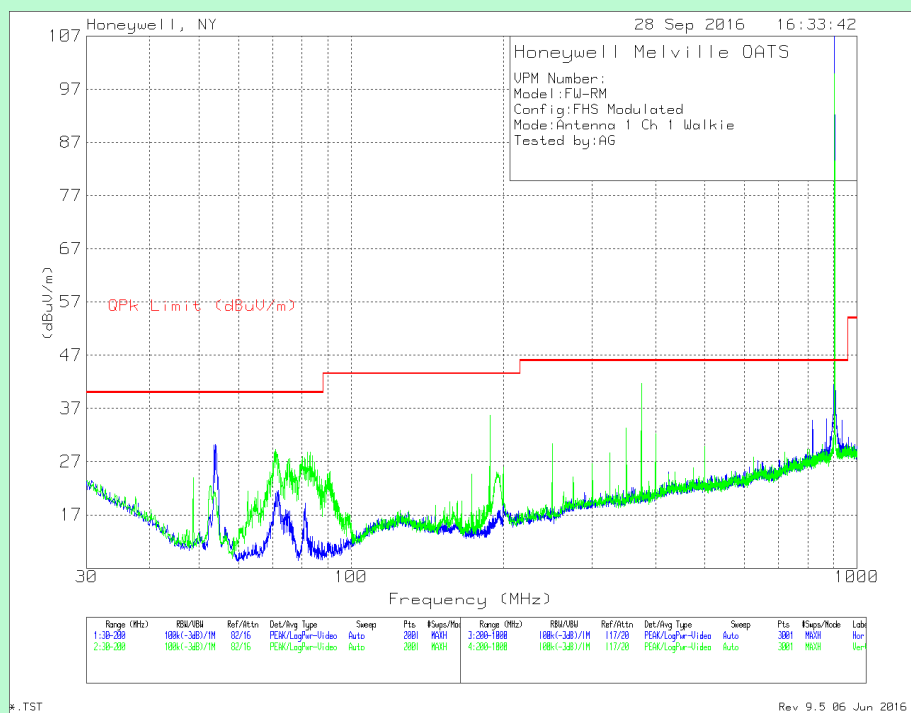


Channel 55 (926.45 MHz) – Antenna 3

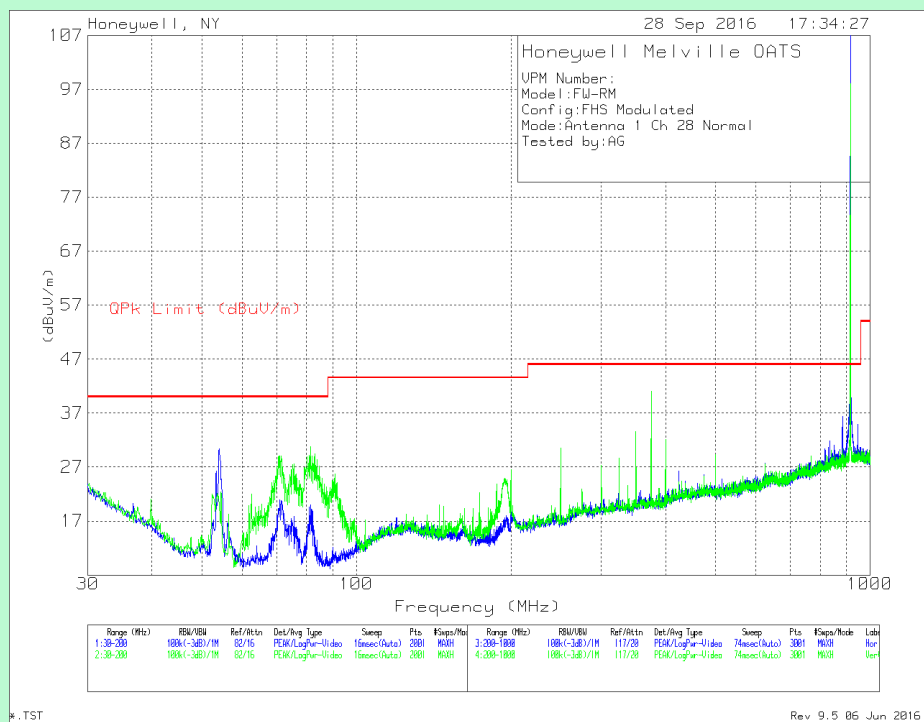
## TEST RESULT – 9 KHz to 30 MHz

| Channel                                                                                                                     | Channel Frequency | Measured Spurious | Quasi Peak | Height | Ant Pol                  | Azimuth | Margin | Limit @ 3m Distance | Results |
|-----------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------|------------|--------|--------------------------|---------|--------|---------------------|---------|
| #                                                                                                                           | MHz               | MHz               | dBµV/m     | cm     | Parallel / Perpendicular | deg     | dB     | dBµV/m              |         |
| No emissions detected that are a product of the transmitter. Emissions shown in the plot are related to the chamber ambient |                   |                   |            |        |                          |         |        |                     |         |
| <b>Note :</b> Measured Field Strength –dBuV/m = Receiver Readings (dBuV) + Antenna Factor (dB/m) + Cable loss (dB)          |                   |                   |            |        |                          |         |        |                     |         |

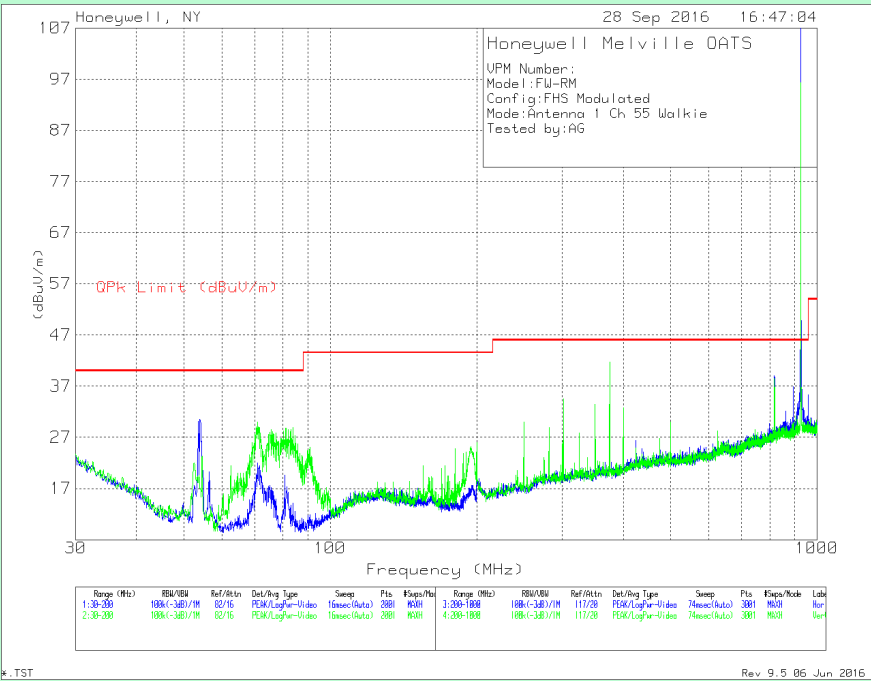
## TEST GRAPHS –30 MHz to 1 GHz (ANTENNA 1)



Channel 1 (903.55 MHz) – Antenna 1



Channel 28 (916.00 MHz) – Antenna 1



Channel 55 (926.45 MHz) – Antenna 1

**TEST RESULT – 30 MHz to 1 GHz**

| <b>Channel 1</b>  |                      |     |                         |            |        |                            |                    |             |                |             |          |
|-------------------|----------------------|-----|-------------------------|------------|--------|----------------------------|--------------------|-------------|----------------|-------------|----------|
| Frequency (MHz)   | Meter Reading (dBuV) | Det | AF [dB/m] JB6 w/4dB pad | Pre Amp #1 | RDE #1 | Corrected Reading (dBuV/m) | QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
| 54.3206           | 45.63                | Qp  | 12                      | -29        | 1.1    | 29.73                      | 40                 | 10.27       | 16             | 378         | H        |
| 70.795            | 39.56                | Qp  | 12.2                    | -28.9      | 1.2    | 24.06                      | 40                 | 15.94       | 142            | 335         | V        |
| 84.0019           | 41.41                | Qp  | 11.7                    | -28.9      | 1.3    | 25.51                      | 40                 | 14.49       | 205            | 130         | V        |
| 188.005           | 30.65                | Qp  | 15.8                    | -28.4      | 2      | 20.05                      | 43.52              | 23.47       | 263            | 346         | V        |
| ** 903.518        | 106.87               | Pk  | 27                      | -27.6      | 5.5    | 111.77                     | -                  | -           | 59             | 100         | H        |
| 375.0128          | 29.86                | Qp  | 19.7                    | -28        | 3.1    | 24.66                      | 46.02              | 21.36       | 128            | 351         | H        |
| ** 903.602        | 95.03                | Pk  | 27                      | -27.6      | 5.5    | 99.93                      | -                  | -           | 181            | 226         | V        |
| 375.0102          | 30.03                | Qp  | 19.7                    | -28        | 3.1    | 24.83                      | 46.02              | 21.19       | 45             | 132         | V        |
| <b>Channel 28</b> |                      |     |                         |            |        |                            |                    |             |                |             |          |
| 53.8704           | 35.81                | Qp  | 12                      | -29        | 1.1    | 19.91                      | 40                 | 20.09       | 335            | 385         | H        |
| 70.7053           | 40.62                | Qp  | 12.2                    | -28.9      | 1.2    | 25.12                      | 40                 | 14.88       | 48             | 153         | V        |
| 81.2035           | 40.27                | Qp  | 11.8                    | -28.9      | 1.3    | 24.47                      | 40                 | 15.53       | 114            | 125         | V        |
| ** 916.048        | 104.97               | Pk  | 27.3                    | -27.5      | 5.6    | 110.37                     | -                  | -           | 49             | 102         | H        |
| 374.911           | 29.64                | Qp  | 19.7                    | -28        | 3.1    | 24.44                      | 46.02              | 21.58       | 68             | 108         | H        |
| ** 915.968        | 93.66                | Pk  | 27.3                    | -27.5      | 5.6    | 99.06                      | -                  | -           | 180            | 141         | V        |
| 349.8549          | 29.58                | Qp  | 19.4                    | -27.9      | 2.9    | 23.98                      | 46.02              | 22.04       | 14             | 258         | V        |
| 374.6358          | 29.69                | Qp  | 19.7                    | -28        | 3.1    | 24.49                      | 46.02              | 21.53       | 227            | 328         | V        |
| <b>Channel 55</b> |                      |     |                         |            |        |                            |                    |             |                |             |          |
| 53.97             | 33.38                | Qp  | 12                      | -29        | 1.1    | 17.48                      | 40                 | 22.52       | 109            | 369         | H        |
| 70.97             | 39.14                | Qp  | 12.2                    | -28.9      | 1.2    | 23.64                      | 40                 | 16.36       | 230            | 233         | V        |
| ** 926.418        | 102.36               | Pk  | 27.3                    | -27.5      | 5.7    | 107.86                     | -                  | -           | 319            | 144         | H        |
| 374.9336          | 29.59                | Qp  | 19.7                    | -28        | 3.1    | 24.39                      | 46.02              | 21.63       | 283            | 259         | H        |
| 818.1341          | 24.12                | Pk  | 26.3                    | -27.9      | 5.2    | 27.72                      | 46.02              | 18.3        | 86             | 279         | H        |
| ** 926.414        | 93.76                | Pk  | 27.3                    | -27.5      | 5.7    | 99.26                      | -                  | -           | 141            | 217         | V        |
| 374.8979          | 29.73                | Qp  | 19.7                    | -28        | 3.1    | 24.53                      | 46.02              | 21.49       | 81             | 285         | V        |

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

\*\* - indicates intended frequency

Pk - Peak detector

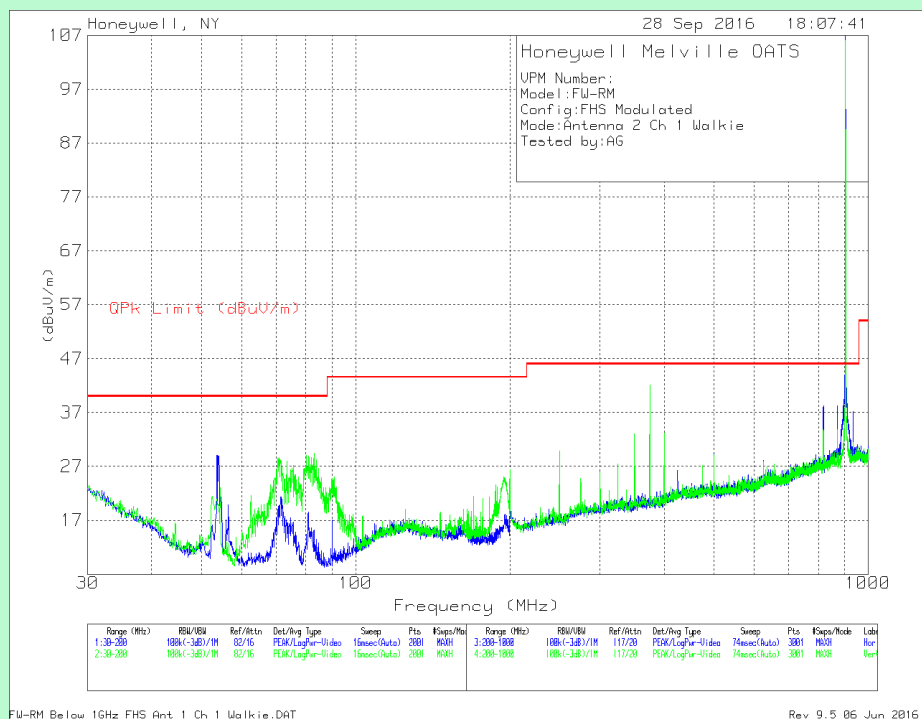
Qp - Quasi-Peak detector

NOTE: Measured Field Strength –dBuV/m (9 KHz to 1GHz) = Receiver Readings (dBuV) + Antenna Factor (dB/m) + Cable loss (dB) - Preamp gain (dB)

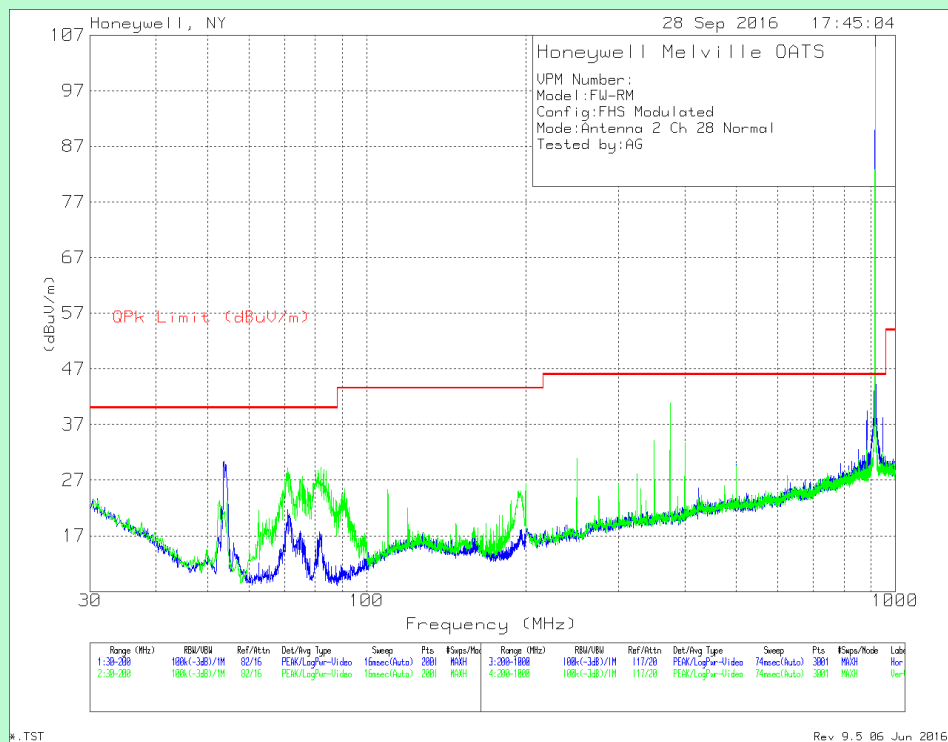
Prescans performed in a pre-compliance chamber. Final measurements performed on an OATS.

Emissions shown in the plot are related to the chamber ambient

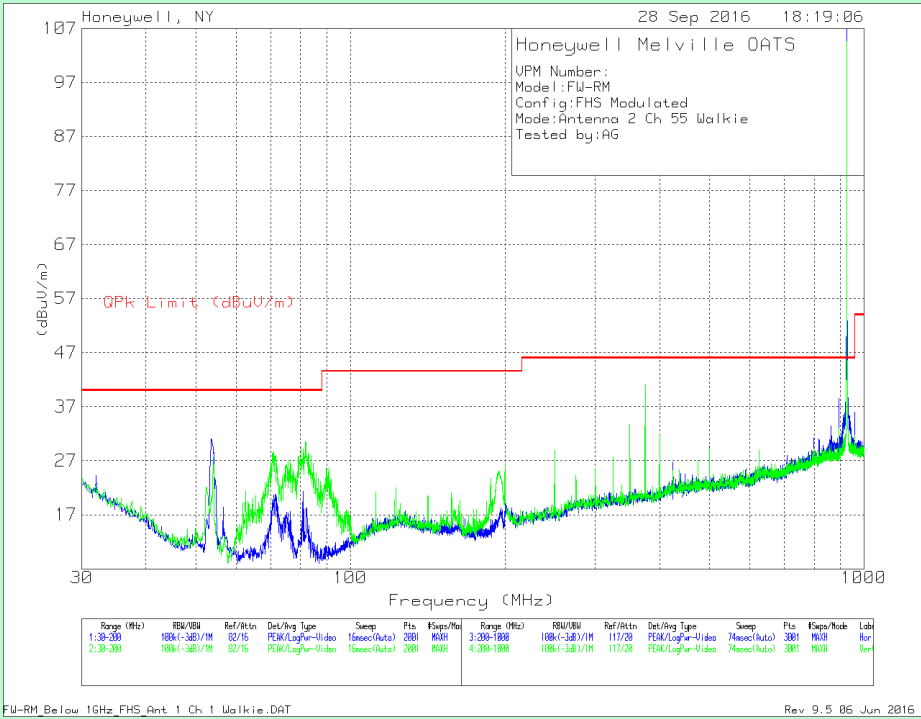
## TEST GRAPHS –30 MHz to 1 GHz (ANTENNA 2)



Channel 1 (903.55 MHz) – Antenna 2



Channel 28 (916.00 MHz) – Antenna 2



Channel 55 (926.45 MHz) – Antenna 2

**TEST RESULT – 30 MHz to 1 GHz**

| <b>Channel 1</b>  |                      |     |                         |            |        |                            |                    |             |                |             |          |
|-------------------|----------------------|-----|-------------------------|------------|--------|----------------------------|--------------------|-------------|----------------|-------------|----------|
| Frequency (MHz)   | Meter Reading (dBuV) | Det | AF [dB/m] JB6 w/4dB pad | Pre Amp #1 | RDE #1 | Corrected Reading (dBuV/m) | QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
| 53.3996           | 33.63                | Qp  | 12.1                    | -29        | 1.1    | 17.83                      | 40                 | 22.17       | 272            | 272         | H        |
| 70.256            | 40.91                | Qp  | 12.2                    | -28.9      | 1.2    | 25.41                      | 40                 | 14.59       | 333            | 207         | V        |
| 82.7436           | 39.19                | Qp  | 11.8                    | -28.9      | 1.3    | 23.39                      | 40                 | 16.61       | 248            | 198         | V        |
| ** 903.51         | 107.56               | Pk  | 27                      | -27.6      | 5.5    | 112.46                     | -                  | -           | 160            | 101         | H        |
| 374.6259          | 29.68                | Qp  | 19.7                    | -28        | 3.1    | 24.48                      | 46.02              | 21.54       | 108            | 202         | H        |
| 818.247           | 32.04                | Qp  | 26.3                    | -27.9      | 5.2    | 35.64                      | 46.02              | 10.38       | 245            | 222         | H        |
| ** 903.51         | 99.42                | Pk  | 27                      | -27.6      | 5.5    | 104.32                     | -                  | -           | 269            | 229         | V        |
| 349.9861          | 29.67                | Qp  | 19.4                    | -27.9      | 2.9    | 24.07                      | 46.02              | 21.95       | 149            | 212         | V        |
| <b>Channel 28</b> |                      |     |                         |            |        |                            |                    |             |                |             |          |
| 53.4632           | 36.07                | Qp  | 12.1                    | -29        | 1.1    | 20.27                      | 40                 | 19.73       | 352            | 398         | H        |
| 70.8254           | 40.92                | Qp  | 12.2                    | -28.9      | 1.2    | 25.42                      | 40                 | 14.58       | 352            | 101         | V        |
| 81.7049           | 41.06                | Qp  | 11.8                    | -28.9      | 1.3    | 25.26                      | 40                 | 14.74       | 139            | 186         | V        |
| ** 915.956        | 104.87               | Pk  | 27.3                    | -27.5      | 5.6    | 110.27                     | -                  | -           | 197            | 250         | H        |
| 374.5978          | 29.63                | Qp  | 19.7                    | -28        | 3.1    | 24.43                      | 46.02              | 21.59       | 42             | 236         | H        |
| ** 915.96         | 98.97                | Pk  | 27.3                    | -27.5      | 5.6    | 104.37                     | -                  | -           | 290            | 223         | V        |
| 350.0404          | 29.78                | Qp  | 19.4                    | -27.9      | 2.9    | 24.18                      | 46.02              | 21.84       | 281            | 351         | V        |
| 374.613           | 29.68                | Qp  | 19.7                    | -28        | 3.1    | 24.48                      | 46.02              | 21.54       | 31             | 400         | V        |
| 53.4632           | 36.07                | Qp  | 12.1                    | -29        | 1.1    | 20.27                      | 40                 | 19.73       | 352            | 398         | H        |
| <b>Channel 55</b> |                      |     |                         |            |        |                            |                    |             |                |             |          |
| 53.63             | 33.63                | Qp  | 12                      | -29        | 1.1    | 17.73                      | 40                 | 22.27       | 211            | 339         | H        |
| 71.1413           | 39.25                | Qp  | 12.2                    | -28.9      | 1.2    | 23.75                      | 40                 | 16.25       | 357            | 376         | V        |
| 81.8433           | 40.43                | Qp  | 11.8                    | -28.9      | 1.3    | 24.63                      | 40                 | 15.37       | 327            | 391         | V        |
| ** 926.502        | 109.39               | Pk  | 27.3                    | -27.5      | 5.7    | 114.89                     | -                  | -           | 209            | 101         | H        |
| 375.0095          | 29.65                | Qp  | 19.7                    | -28        | 3.1    | 24.45                      | 46.02              | 21.57       | 92             | 176         | H        |
| ** 926.502        | 96.27                | Pk  | 27.3                    | -27.5      | 5.7    | 101.77                     | -                  | -           | 121            | 104         | V        |
| 350.3368          | 29.65                | Qp  | 19.4                    | -27.9      | 2.9    | 24.05                      | 46.02              | 21.97       | 244            | 207         | V        |
| 375.0133          | 29.93                | Qp  | 19.7                    | -28        | 3.1    | 24.73                      | 46.02              | 21.29       | 40             | 110         | V        |
| 53.63             | 33.63                | Qp  | 12                      | -29        | 1.1    | 17.73                      | 40                 | -22.27      | 211            | 339         | H        |

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

\*\* - indicates intended frequency

Pk - Peak detector

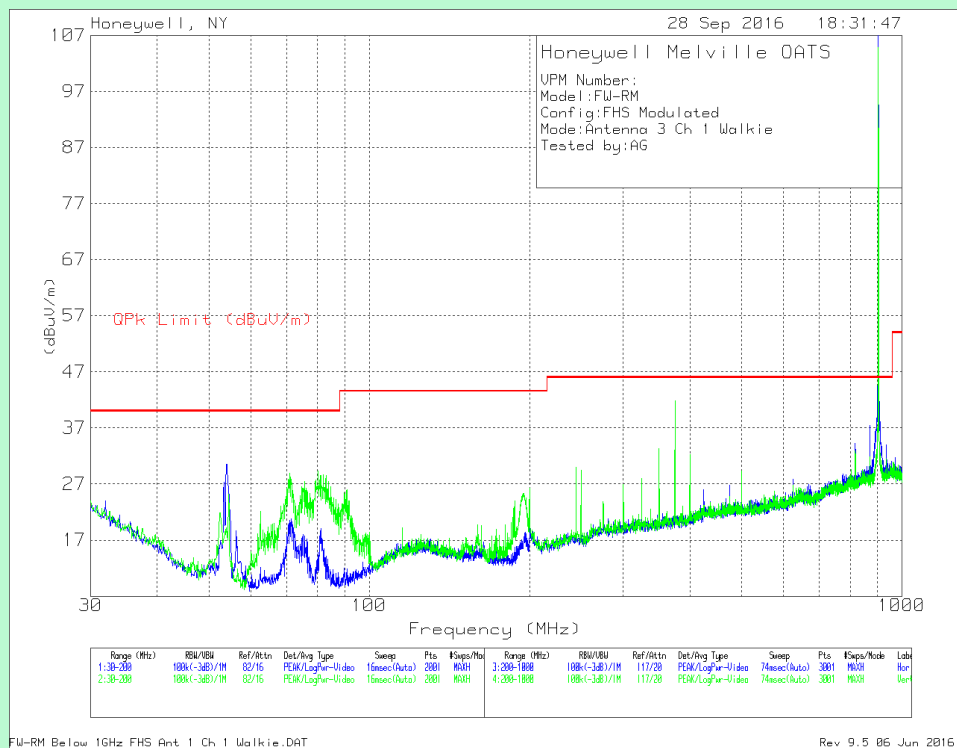
Qp - Quasi-Peak detector

NOTE: Measured Field Strength –dBuV/m (9 KHz to 1GHz) = Receiver Readings (dBuV) + Antenna Factor (dB/m) + Cable loss (dB) - Preamp gain (dB)

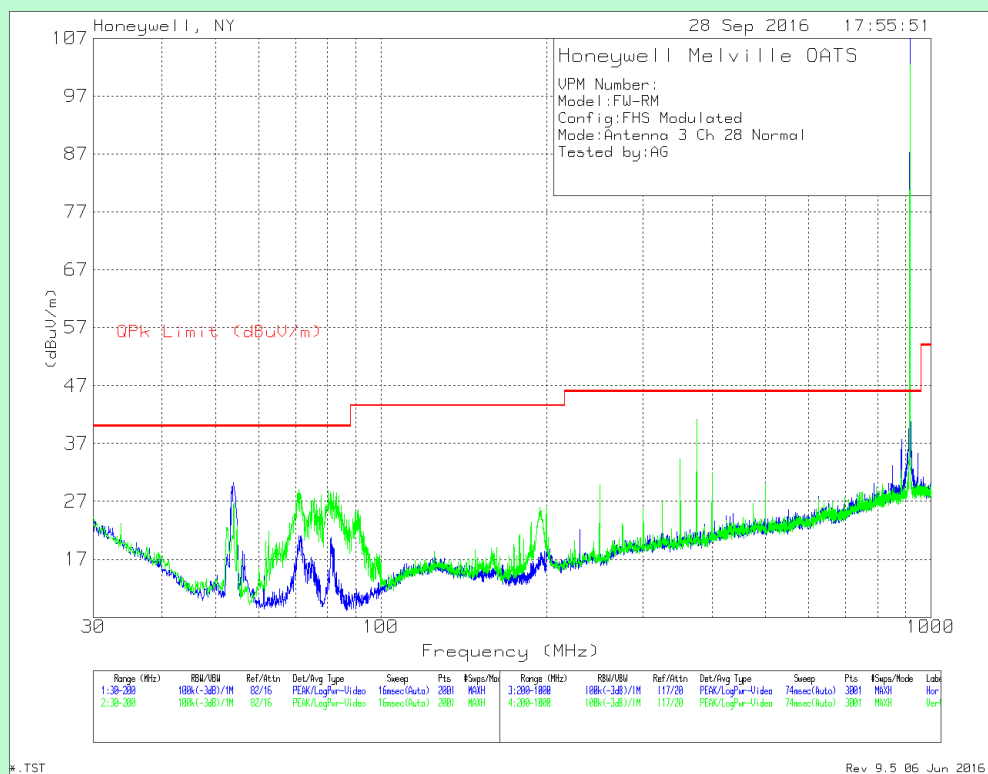
Prescans performed in a pre-compliance chamber. Final measurements performed on an OATS.

Emissions shown in the plot are related to the chamber ambient

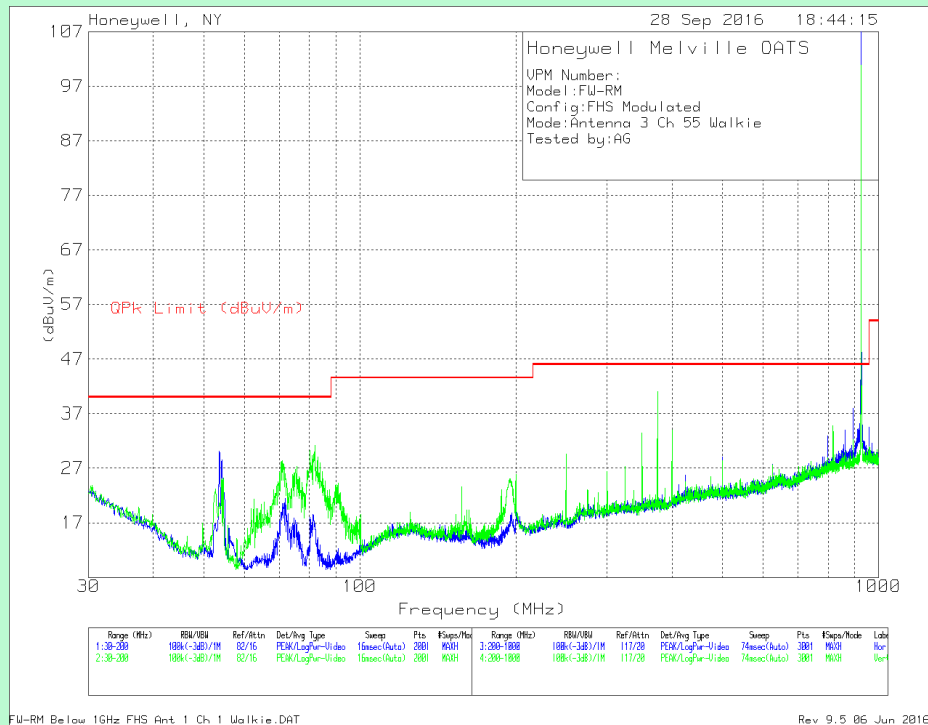
## TEST GRAPHS –30 MHz to 1 GHz (ANTENNA 3)



Channel 1 (903.55 MHz) – Antenna 3



Channel 28 (916.00 MHz) – Antenna 3



Channel 55 (926.45 MHz) – Antenna 3

## TEST RESULT – 30 MHz to 1 GHz

| Channel 1       |                      |     |                         |            |        |                            |                    |             |                |             |          |
|-----------------|----------------------|-----|-------------------------|------------|--------|----------------------------|--------------------|-------------|----------------|-------------|----------|
| Frequency (MHz) | Meter Reading (dBuV) | Det | AF [dB/m] JB6 w/4dB pad | Pre Amp #1 | RDE #1 | Corrected Reading (dBuV/m) | QPk Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
| 53.8894         | 34.55                | Qp  | 12                      | -29        | 1.1    | 18.65                      | 40                 | 21.35       | 116            | 303         | H        |
| 70.82           | 40.94                | Qp  | 12.2                    | -28.9      | 1.2    | 25.44                      | 40                 | 14.56       | 317            | 104         | V        |
| 80.0108         | 45.42                | Qp  | 11.9                    | -28.9      | 1.3    | 29.72                      | 40                 | 10.28       | 22             | 148         | V        |
| ** 903.506      | 107.64               | Pk  | 27                      | -27.6      | 5.5    | 112.54                     | -                  | -           | 165            | 158         | H        |
| 374.7697        | 29.71                | Qp  | 19.7                    | -28        | 3.1    | 24.51                      | 46.02              | 21.51       | 94             | 228         | H        |
| ** 903.562      | 89.91                | Pk  | 27                      | -27.6      | 5.5    | 94.81                      | -                  | -           | 222            | 191         | V        |
| 349.9974        | 29.78                | Qp  | 19.4                    | -27.9      | 2.9    | 24.18                      | 46.02              | 21.84       | 303            | 110         | V        |
| 374.7726        | 29.72                | Qp  | 19.7                    | -28        | 3.1    | 24.52                      | 46.02              | 21.5        | 10             | 264         | V        |
| Channel 28      |                      |     |                         |            |        |                            |                    |             |                |             |          |
| 53.885          | 31.19                | Qp  | 12                      | -29        | 1.1    | 15.29                      | 40                 | 24.71       | 46             | 225         | H        |
| 71.565          | 33.01                | Qp  | 12.2                    | -28.9      | 1.2    | 17.51                      | 40                 | 22.49       | 62             | 249         | H        |
| 81.255          | 32.72                | Qp  | 11.8                    | -28.9      | 1.3    | 16.92                      | 40                 | 23.08       | 121            | 400         | H        |
| 70.97           | 38.58                | Qp  | 12.2                    | -28.9      | 1.2    | 23.08                      | 40                 | 16.92       | 4              | 383         | V        |
| 195.665         | 30.35                | Qp  | 16.4                    | -28.3      | 2.1    | 20.55                      | 43.52              | 22.97       | 87             | 375         | V        |
| ** 916.048      | 107.99               | Pk  | 27.3                    | -27.5      | 5.6    | 113.39                     | -                  | -           | 30             | 101         | H        |
| ** 916.052      | 99.74                | Pk  | 27.3                    | -27.5      | 5.6    | 105.14                     | -                  | -           | 267            | 117         | V        |
| * 250.1334      | 30.33                | Qp  | 16.3                    | -28        | 2.4    | 21.03                      | 46.02              | 24.99       | 341            | 332         | V        |
| Channel 55      |                      |     |                         |            |        |                            |                    |             |                |             |          |
| 53.63           | 34.74                | Qp  | 12                      | -29        | 1.1    | 18.84                      | 40                 | 21.16       | 198            | 385         | H        |
| 70.779          | 40.87                | Qp  | 12.2                    | -28.9      | 1.2    | 25.37                      | 40                 | 14.63       | 197            | 139         | V        |
| 81.8633         | 42.33                | Qp  | 11.8                    | -28.9      | 1.3    | 26.53                      | 40                 | 13.47       | 298            | 185         | V        |
| ** 926.406      | 106.5                | Pk  | 27.3                    | -27.5      | 5.7    | 112                        | -                  | -           | 189            | 103         | H        |
| 374.6703        | 29.55                | Qp  | 19.7                    | -28        | 3.1    | 24.35                      | 46.02              | 21.67       | 168            | 156         | H        |
| ** 926.51       | 94.52                | Pk  | 27.3                    | -27.5      | 5.7    | 100.02                     | -                  | -           | 174            | 233         | V        |
| 350.0271        | 29.6                 | Qp  | 19.4                    | -27.9      | 2.9    | 24                         | 46.02              | 22.02       | 4              | 221         | V        |
| 374.5815        | 29.74                | Qp  | 19.7                    | -28        | 3.1    | 24.54                      | 46.02              | 21.48       | 138            | 379         | V        |
| 53.63           | 34.74                | Qp  | 12                      | -29        | 1.1    | 18.84                      | 40                 | 21.16       | 198            | 385         | H        |

\* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band

\*\* - indicates intended frequency

Pk - Peak detector

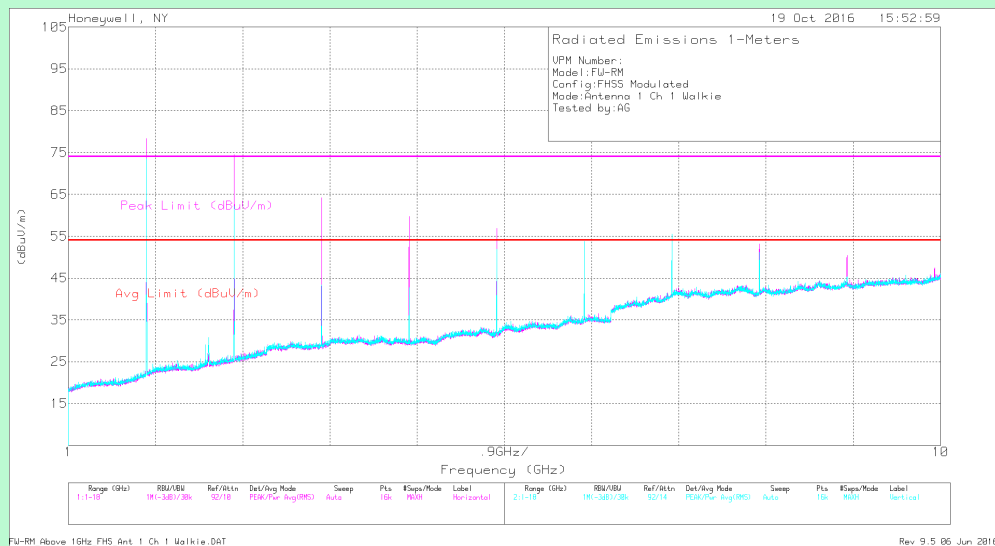
Qp - Quasi-Peak detector

NOTE: Measured Field Strength –dBuV/m (9 KHz to 1GHz) = Receiver Readings (dBuV) + Antenna Factor (dB/m) + Cable loss (dB) - Preamp gain (dB)

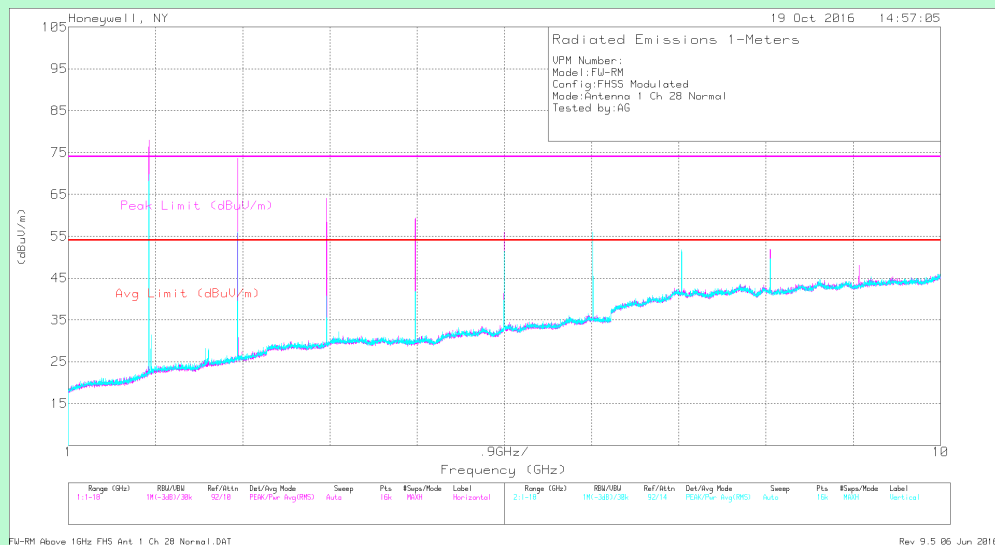
Prescans performed in a pre-compliance chamber. Final measurements performed on an OATS.

Emissions shown in the plot are related to the chamber ambient

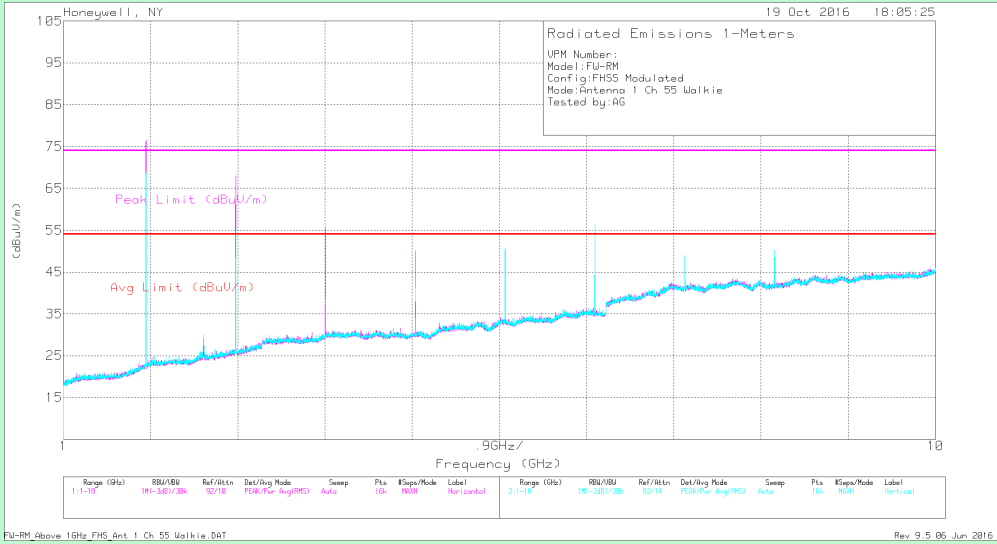
TEST GRAPHS –1 GHz to 10 GHz (ANTENNA 1)



Channel 1 (903.55 MHz) – Antenna 1



Channel 28 (916.00 MHz) – Antenna 1



Channel 55 (926.45 MHz) – Antenna 1

## TEST RESULT – 1 GHz to 10 GHz – CHANNEL 1

## PEAK DATA – RESTRICTED BAND

| Frequency (GHz) | Meter Reading (dBuV) | Det  | AF [dB/m] | Preamp [dB] | SMA1 [dB] | Corrected Reading (dBuV/m) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|------|-----------|-------------|-----------|----------------------------|---------------------|----------------|----------------|-------------|----------|
| * 2.71          | 38.19                | PKFH | 29.3      | -27.1       | 9         | 49.39                      | 74                  | 24.61          | 36             | 170         | H        |
| * 3.614         | 33.47                | PKFH | 31.6      | -26.8       | 10.4      | 48.67                      | 74                  | 25.33          | 119            | 208         | H        |
| * 4.518         | 32.8                 | PKFH | 32.2      | -26.6       | 11.7      | 50.1                       | 74                  | 23.9           | 161            | 208         | H        |
| * 5.422         | 41.62                | PKFH | 34.3      | -26.7       | 12.9      | 62.12                      | 74                  | 11.88          | 2              | 305         | H        |
| * 8.133         | 37.93                | PKFH | 37.1      | -26.2       | 16        | 64.83                      | 74                  | 9.17           | 340            | 239         | H        |
| * 9.035         | 33.49                | PKFH | 37.6      | -25.9       | 16.9      | 62.09                      | 74                  | 11.91          | 356            | 262         | H        |
| * 2.711         | 39.34                | PKFH | 29.3      | -27.1       | 9         | 50.54                      | 74                  | 23.46          | 215            | 360         | V        |
| * 3.614         | 36.02                | PKFH | 31.6      | -26.8       | 10.4      | 51.22                      | 74                  | 22.78          | 256            | 333         | V        |
| * 4.518         | 34.33                | PKFH | 32.2      | -26.6       | 11.7      | 51.63                      | 74                  | 22.37          | 52             | 348         | V        |
| * 5.422         | 40.13                | PKFH | 34.3      | -26.7       | 12.9      | 60.63                      | 74                  | 13.37          | 114            | 333         | V        |
| * 8.133         | 35.72                | PKFH | 37.1      | -26.2       | 16        | 62.62                      | 74                  | 11.38          | 62             | 382         | V        |
| * 9.036         | 32.66                | PKFH | 37.6      | -25.9       | 16.9      | 61.26                      | 74                  | 12.74          | 72             | 381         | V        |

## PEAK DATA – NON RESTRICTED BAND

| Frequency (GHz) | Meter Reading (dBuV) | Det  | AF [dB/m] | Preamp [dB] | SMA1 [dB] | Corrected Reading (dBuV/m) | Peak Limit [Fundamental-20dBc] (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|------|-----------|-------------|-----------|----------------------------|-----------------------------------------|----------------|----------------|-------------|----------|
| 1.807           | 59.3                 | PKFH | 27.1      | -26.9       | 7.3       | 66.8                       | 91.8                                    | 25             | 44             | 169         | H        |
| 6.325           | 38.35                | PKFH | 34.9      | -26.4       | 14        | 60.85                      | 91.8                                    | 30.95          | 110            | 278         | H        |
| 7.228           | 37.81                | PKFH | 36.3      | -26.2       | 15        | 62.91                      | 91.8                                    | 28.89          | 320            | 254         | H        |
| 1.807           | 48.85                | PKFH | 27.1      | -26.9       | 7.3       | 56.35                      | 91.8                                    | 35.45          | 223            | 298         | V        |
| 6.324           | 42.15                | PKFH | 34.9      | -26.4       | 14        | 64.65                      | 91.8                                    | 27.15          | 8              | 265         | V        |
| 7.229           | 40.29                | PKFH | 36.3      | -26.2       | 15        | 65.39                      | 91.8                                    | 26.41          | 254            | 273         | V        |

## AVERAGE DATA – RESTRICTED BAND

| Frequency (GHz) | Meter Reading (dBuV) | Det | AF [dB/m] | Preamp [dB] | SMA1 [dB] | DC Corr (dB) | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|-----|-----------|-------------|-----------|--------------|----------------------------|--------------------|-------------|----------------|-------------|----------|
| * 2.711         | 34.36                | VA1 | 29.3      | -27.1       | 9         | -12.53       | 33.03                      | 54                 | 20.97       | 36             | 170         | H        |
| * 3.614         | 26.4                 | VA1 | 31.6      | -26.8       | 10.4      | -12.53       | 29.07                      | 54                 | 24.93       | 119            | 208         | H        |
| * 4.518         | 24.39                | VA1 | 32.2      | -26.6       | 11.7      | -12.53       | 29.16                      | 54                 | 24.84       | 161            | 208         | H        |
| * 5.421         | 36.24                | VA1 | 34.3      | -26.7       | 12.9      | -12.53       | 44.21                      | 54                 | 9.79        | 2              | 305         | H        |
| * 8.133         | 28.97                | VA1 | 37.1      | -26.2       | 16        | -12.53       | 43.34                      | 54                 | 10.66       | 340            | 239         | H        |
| * 9.036         | 25.11                | VA1 | 37.6      | -25.9       | 16.9      | -12.53       | 41.18                      | 54                 | 12.82       | 356            | 262         | H        |
| * 2.711         | 36.2                 | VA1 | 29.3      | -27.1       | 9         | -12.53       | 34.87                      | 54                 | 19.13       | 215            | 360         | V        |
| * 3.614         | 30.93                | VA1 | 31.6      | -26.8       | 10.4      | -12.53       | 33.6                       | 54                 | 20.4        | 256            | 333         | V        |
| * 4.518         | 27.07                | VA1 | 32.2      | -26.6       | 11.7      | -12.53       | 31.84                      | 54                 | 22.16       | 52             | 348         | V        |
| * 5.421         | 33.99                | VA1 | 34.3      | -26.7       | 12.9      | -12.53       | 41.96                      | 54                 | 12.04       | 114            | 333         | V        |
| * 8.133         | 27.2                 | VA1 | 37.1      | -26.2       | 16        | -12.53       | 41.57                      | 54                 | 12.43       | 62             | 382         | V        |
| * 9.035         | 23.21                | VA1 | 37.6      | -25.9       | 16.9      | -12.53       | 39.28                      | 54                 | 14.72       | 72             | 381         | V        |

Note: \* Indicates Frequency in CFR47 Pt 15 Restricted Band

PKFH – FHSS: RB=1MHz ,VB=3x RB ,Peak

VA1T-FHSS: Linear Voltage Average RB=1MHzVB=10Hz

Field Strength –dBuV/m = Receiver Readings (dBuV) + Antenna Factor (dB/m) + Cable loss (dB) + Filter Insertion loss – Preamplifier Gain (dB)

Prescans performed in a pre-compliance chamber. Final measurements performed on an OATS

Duty Cycle Correction Factor is calculated using the guidelines provided in DA 00 -705

Duty Cycle Factor =20\*log (Dwell time /100msec), Number of Transmission for 100msec: 8, Dwell time per Transmission: 1.575 msec

Duty Cycle correction Factor =20 log (1.575\*8/100) = -17.99dB

## TEST RESULT – 1 GHz to 10 GHz – CHANNEL 28

## PEAK DATA – RESTRICTED BAND

| Frequency (GHz) | Meter Reading (dBuV) | Det  | AF [dB/m] | Preamp [dB] | SMA1 [dB] | Corrected Reading (dBuV/m) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|------|-----------|-------------|-----------|----------------------------|---------------------|----------------|----------------|-------------|----------|
| * 2.748         | 39.75                | PKFH | 29.4      | -27         | 9         | 51.15                      | 74                  | 22.85          | 263            | 115         | H        |
| * 3.664         | 34.44                | PKFH | 31.8      | -26.9       | 10.4      | 49.74                      | 74                  | 24.26          | 186            | 387         | H        |
| * 4.58          | 35.79                | PKFH | 32.2      | -26.7       | 11.8      | 53.09                      | 74                  | 20.91          | 339            | 321         | H        |
| * 7.328         | 36.89                | PKFH | 36.7      | -26.2       | 15.1      | 62.49                      | 74                  | 11.51          | 306            | 267         | H        |
| * 8.245         | 37.41                | PKFH | 37.1      | -26.1       | 16.2      | 64.61                      | 74                  | 9.39           | 336            | 249         | H        |
| * 9.161         | 31.27                | PKFH | 37.6      | -25.9       | 17        | 59.97                      | 74                  | 14.03          | 116            | 188         | H        |
| * 2.748         | 41.66                | PKFH | 29.4      | -27         | 9         | 53.06                      | 74                  | 20.94          | 212            | 291         | V        |
| * 3.664         | 35.26                | PKFH | 31.8      | -26.9       | 10.4      | 50.56                      | 74                  | 23.44          | 262            | 335         | V        |
| * 4.581         | 35.6                 | PKFH | 32.2      | -26.7       | 11.8      | 52.9                       | 74                  | 21.1           | 54             | 310         | V        |
| * 7.329         | 39.65                | PKFH | 36.7      | -26.2       | 15.1      | 65.25                      | 74                  | 8.75           | 249            | 255         | V        |
| * 8.244         | 34.74                | PKFH | 37.1      | -26.1       | 16.2      | 61.94                      | 74                  | 12.06          | 58             | 271         | V        |
| * 9.161         | 33.77                | PKFH | 37.6      | -25.9       | 17        | 62.47                      | 74                  | 11.53          | 321            | 242         | V        |

## PEAK DATA – NON RESTRICTED BAND

| Frequency (GHz) | Meter Reading (dBuV) | Det  | AF [dB/m] | Preamp [dB] | SMA1 [dB] | Corrected Reading (dBuV/m) | Peak Limit [Fundamental-20dBc] (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|------|-----------|-------------|-----------|----------------------------|-----------------------------------------|----------------|----------------|-------------|----------|
| 1.832           | 55.94                | PKFH | 27.3      | -26.9       | 7.3       | 63.64                      | 80.4                                    | 16.76          | 41             | 163         | H        |
| 5.496           | 42.9                 | PKFH | 34.4      | -26.6       | 13        | 63.7                       | 80.4                                    | 16.7           | 0              | 290         | H        |
| 6.413           | 39.42                | PKFH | 34.8      | -26.3       | 14.1      | 62.02                      | 80.4                                    | 18.38          | 298            | 279         | H        |
| 1.832           | 47.88                | PKFH | 27.3      | -26.9       | 7.3       | 55.58                      | 80.4                                    | 24.82          | 228            | 191         | V        |
| 5.497           | 41.66                | PKFH | 34.4      | -26.6       | 13        | 62.46                      | 80.4                                    | 17.94          | 352            | 278         | V        |
| 6.412           | 44.34                | PKFH | 34.8      | -26.3       | 14.1      | 66.94                      | 80.4                                    | 13.46          | 6              | 258         | V        |

## AVERAGE DATA – RESTRICTED BAND

| Frequency (GHz) | Meter Reading (dBuV) | Det  | AF [dB/m] | Preamp [dB] | SMA1 [dB] | DC Corr [dB] | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|------|-----------|-------------|-----------|--------------|----------------------------|--------------------|-------------|----------------|-------------|----------|
| * 2.748         | 36.65                | VA1T | 29.4      | -27         | 9         | -12.53       | 35.52                      | 54                 | 18.48       | 263            | 115         | H        |
| * 3.664         | 29.25                | VA1T | 31.8      | -26.9       | 10.4      | -12.53       | 32.02                      | 54                 | 21.98       | 186            | 387         | H        |
| * 4.58          | 28.27                | VA1T | 32.2      | -26.7       | 11.8      | -12.53       | 33.04                      | 54                 | 20.96       | 339            | 321         | H        |
| * 7.328         | 28.57                | VA1T | 36.7      | -26.2       | 15.1      | -12.53       | 41.64                      | 54                 | 12.36       | 306            | 267         | H        |
| * 8.244         | 29.27                | VA1T | 37.1      | -26.1       | 16.2      | -12.53       | 43.94                      | 54                 | 10.06       | 336            | 249         | H        |
| * 9.162         | 21.51                | VA1T | 37.6      | -25.9       | 17        | -12.53       | 37.68                      | 54                 | 16.32       | 116            | 188         | H        |
| * 2.748         | 39.03                | VA1T | 29.4      | -27         | 9         | -12.53       | 37.9                       | 54                 | 16.1        | 212            | 291         | V        |
| * 3.664         | 29.38                | VA1T | 31.8      | -26.9       | 10.4      | -12.53       | 32.15                      | 54                 | 21.85       | 262            | 335         | V        |
| * 4.58          | 28.12                | VA1T | 32.2      | -26.7       | 11.8      | -12.53       | 32.89                      | 54                 | 21.11       | 54             | 310         | V        |
| * 7.328         | 30.53                | VA1T | 36.7      | -26.2       | 15.1      | -12.53       | 43.6                       | 54                 | 10.4        | 249            | 255         | V        |
| * 8.244         | 26.7                 | VA1T | 37.1      | -26.1       | 16.2      | -12.53       | 41.37                      | 54                 | 12.63       | 58             | 271         | V        |
| * 9.161         | 24.58                | VA1T | 37.6      | -25.9       | 17        | -12.53       | 40.75                      | 54                 | 13.25       | 321            | 242         | V        |

Note: \* Indicates Frequency in CFR47 Pt 15 Restricted Band  
 PKFH –FHSS: RB=1MHz ,VB=3x RB ,Peak  
 VA1T-FHSS: Linear Voltage Average RB=1MHzVB=10Hz

Field Strength –dBuV/m = Receiver Readings (dBuV) + Antenna Factor (dB/m) + Cable loss (dB) + Filter Insertion loss – Preamplifier Gain (dB)

Prescans performed in a pre-compliance chamber. Final measurements performed on an OATS

Duty Cycle Correction Factor is calculated using the guidelines provided in DA 00 -705

Duty Cycle Factor =20\*log (Dwell time /100msec), Number of Transmission for 100msec: 8, Dwell time per Transmission: 1.575 msec  
 Duty Cycle correction Factor =20 log (1.575\*8/100) = -17.99dB

## TEST RESULT – 1 GHz to 10 GHz – CHANNEL 55

## PEAK DATA – RESTRICTED BAND

| Frequency (GHz) | Meter Reading (dBuV) | Det  | AF [dB/m] | Preamp [dB] | SMA1 [dB] | Corrected Reading (dBuV/m) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|------|-----------|-------------|-----------|----------------------------|---------------------|----------------|----------------|-------------|----------|
| * 2.779         | 41.96                | PKFH | 29.5      | -27.1       | 9.1       | 53.46                      | 74                  | 20.54          | 271            | 400         | H        |
| * 3.706         | 34.9                 | PKFH | 32        | -26.9       | 10.6      | 50.6                       | 74                  | 23.4           | 175            | 335         | H        |
| * 3.706         | 35.39                | PKFH | 32        | -26.9       | 10.6      | 51.09                      | 74                  | 22.91          | 175            | 335         | H        |
| * 4.633         | 35.6                 | PKFH | 32.4      | -26.6       | 11.8      | 53.2                       | 74                  | 20.8           | 340            | 341         | H        |
| * 7.412         | 35.58                | PKFH | 36.8      | -26.2       | 15.2      | 61.38                      | 74                  | 12.62          | 306            | 253         | H        |
| * 8.337         | 35.67                | PKFH | 37.3      | -26.1       | 16.2      | 63.07                      | 74                  | 10.93          | 326            | 240         | H        |
| * 2.779         | 41.62                | PKFH | 29.5      | -27.1       | 9.1       | 53.12                      | 74                  | 20.88          | 221            | 371         | V        |
| * 3.706         | 35.4                 | PKFH | 32        | -26.9       | 10.6      | 51.1                       | 74                  | 22.9           | 254            | 394         | V        |
| * 4.632         | 34.82                | PKFH | 32.3      | -26.6       | 11.8      | 52.32                      | 74                  | 21.68          | 255            | 342         | V        |
| * 7.411         | 36.88                | PKFH | 36.8      | -26.2       | 15.2      | 62.68                      | 74                  | 11.32          | 248            | 247         | V        |
| * 8.339         | 34.69                | PKFH | 37.3      | -26.1       | 16.2      | 62.09                      | 74                  | 11.91          | 62             | 241         | V        |

## PEAK DATA – NON RESTRICTED BAND

| Frequency (GHz) | Meter Reading (dBuV) | Det  | AF [dB/m] | Preamp [dB] | SMA1 [dB] | Corrected Reading (dBuV/m) | Peak Limit [Fundamental-20dBc] (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|------|-----------|-------------|-----------|----------------------------|-----------------------------------------|----------------|----------------|-------------|----------|
| 1.853           | 51.66                | PKFH | 27.5      | -26.9       | 7.4       | 59.66                      | 87.8                                    | 28.14          | 28             | 102         | H        |
| 5.558           | 40.62                | PKFH | 34.4      | -26.4       | 13.1      | 61.72                      | 87.8                                    | 26.08          | 358            | 283         | H        |
| 6.485           | 39.15                | PKFH | 34.8      | -26.4       | 14.2      | 61.75                      | 87.8                                    | 26.05          | 304            | 268         | H        |
| 9.263           | 30.9                 | PKFH | 37.8      | -26         | 17.1      | 59.8                       | 87.8                                    | 28             | 168            | 290         | H        |
| 1.853           | 47.98                | PKFH | 27.5      | -26.9       | 7.4       | 55.98                      | 87.8                                    | 31.82          | 109            | 379         | V        |
| 5.558           | 39.09                | PKFH | 34.4      | -26.4       | 13.1      | 60.19                      | 87.8                                    | 27.61          | 73             | 312         | V        |
| 6.485           | 44.53                | PKFH | 34.8      | -26.4       | 14.2      | 67.13                      | 87.8                                    | 20.67          | 0              | 249         | V        |
| 9.265           | 32.02                | PKFH | 37.8      | -26         | 17.1      | 60.92                      | 87.8                                    | 26.88          | 322            | 255         | V        |

## AVERAGE DATA – RESTRICTED BAND

| Frequency (GHz) | Meter Reading (dBuV) | Det  | AF [dB/m] | Preamp [dB] | SMA1 [dB] | DC Corr [dB] | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|------|-----------|-------------|-----------|--------------|----------------------------|--------------------|-------------|----------------|-------------|----------|
| * 2.779         | 39.31                | VA1T | 29.5      | -27.1       | 9.1       | -12.53       | 38.28                      | 54                 | 15.72       | 271            | 400         | H        |
| * 3.706         | 29.79                | VA1T | 32        | -26.9       | 10.6      | -12.53       | 32.96                      | 54                 | 21.04       | 175            | 335         | H        |
| * 3.706         | 30.31                | VA1T | 32        | -26.9       | 10.6      | -12.53       | 33.48                      | 54                 | 20.52       | 175            | 335         | H        |
| * 4.632         | 28.28                | VA1T | 32.4      | -26.6       | 11.8      | -12.53       | 33.35                      | 54                 | 20.65       | 340            | 341         | H        |
| * 7.411         | 27.48                | VA1T | 36.8      | -26.2       | 15.2      | -12.53       | 40.75                      | 54                 | 13.25       | 306            | 253         | H        |
| * 8.339         | 27.68                | VA1T | 37.3      | -26.1       | 16.2      | -12.53       | 42.55                      | 54                 | 11.45       | 326            | 240         | H        |
| * 2.779         | 39.2                 | VA1T | 29.5      | -27.1       | 9.1       | -12.53       | 38.17                      | 54                 | 15.83       | 221            | 371         | V        |
| * 3.706         | 30.61                | VA1T | 32        | -26.9       | 10.6      | -12.53       | 33.78                      | 54                 | 20.22       | 254            | 394         | V        |
| * 4.632         | 27.94                | VA1T | 32.3      | -26.6       | 11.8      | -12.53       | 32.91                      | 54                 | 21.09       | 255            | 342         | V        |
| * 7.412         | 29.19                | VA1T | 36.8      | -26.2       | 15.2      | -12.53       | 42.46                      | 54                 | 11.54       | 248            | 247         | V        |
| * 8.337         | 26.64                | VA1T | 37.3      | -26.1       | 16.2      | -12.53       | 41.51                      | 54                 | 12.49       | 62             | 241         | V        |

Note: \* Indicates Frequency in CFR47 Pt 15 Restricted Band

PKFH –FHSS: RB=1MHz ,VB=3x RB ,Peak

VA1T-FHSS: Linear Voltage Average RB=1MHzVB=10Hz

Field Strength –dBuV/m = Receiver Readings (dBuV) + Antenna Factor (dB/m) + Cable loss (dB) + Filter Insertion loss – Preamplifier Gain (dB)

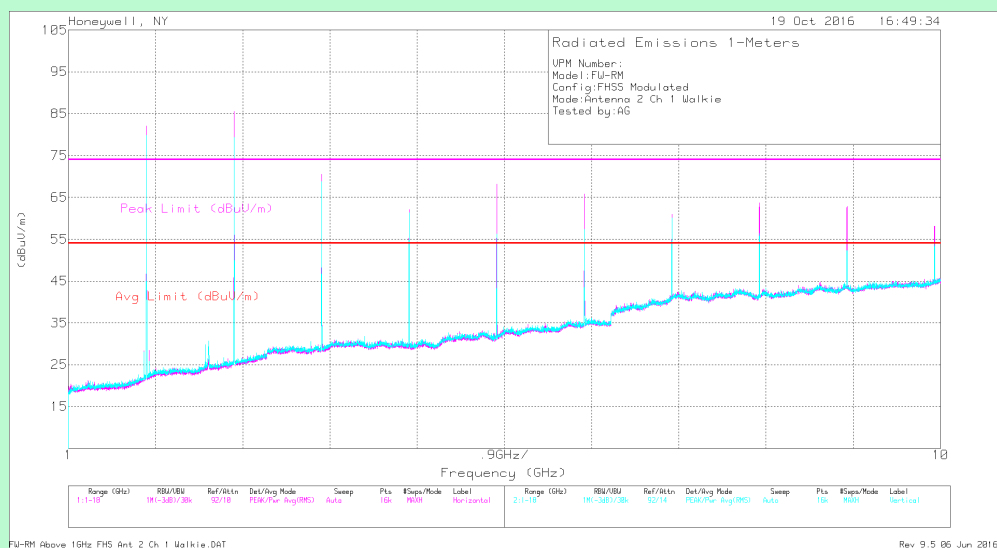
Prescans performed in a pre-compliance chamber. Final measurements performed on an OATS

Duty Cycle Correction Factor is calculated using the guidelines provided in DA 00 -705

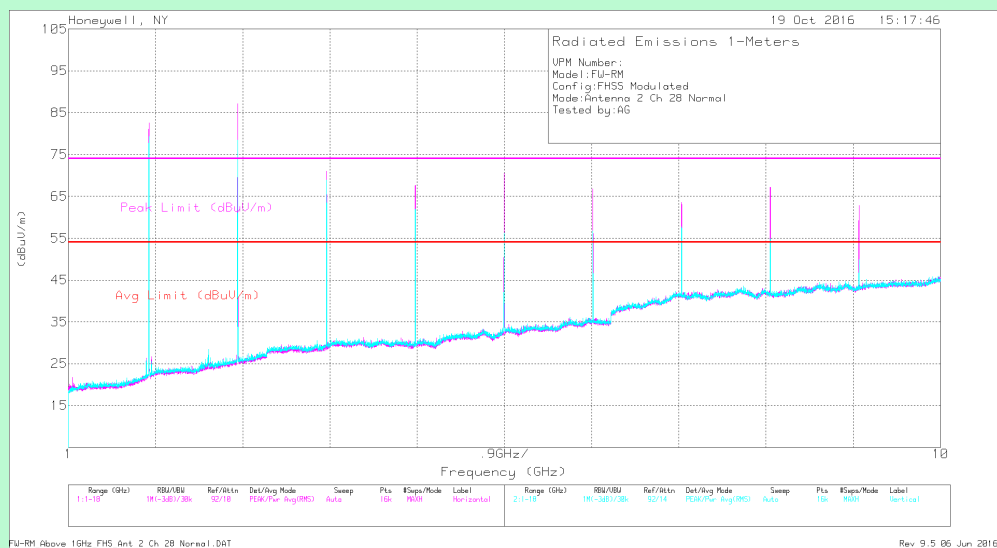
Duty Cycle Factor =20\*log (Dwell time /100msec), Number of Transmission for 100msec: 8, Dwell time per Transmission: 1.575 msec

Duty Cycle correction Factor =20 log (1.575\*8/100) = -17.99dB

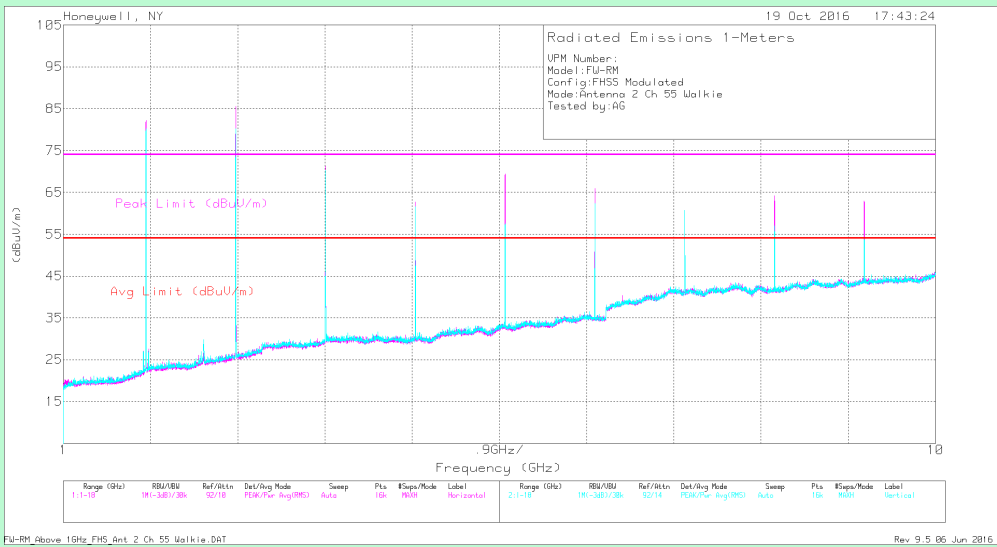
## TEST GRAPHS –1 GHz to 10 GHz (ANTENNA 2)



Channel 1 (903.55 MHz) – Antenna 2



Channel 28 (916.00 MHz) – Antenna 2



Channel 55 (926.45 MHz) – Antenna 2

## TEST RESULT – 1 GHz to 10 GHz – CHANNEL 1

### PEAK DATA – RESTRICTED BAND

| Frequency (GHz) | Meter Reading (dBuV) | Det  | AF [dB/m] | Preamp [dB] | SMA1 [dB] | Corrected Reading (dBuV/m) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|------|-----------|-------------|-----------|----------------------------|---------------------|----------------|----------------|-------------|----------|
| * 2.71          | 52.71                | PKFH | 29.3      | -27.1       | 9         | 63.91                      | 74                  | 10.09          | 129            | 150         | H        |
| * 3.614         | 46.27                | PKFH | 31.6      | -26.8       | 10.4      | 61.47                      | 74                  | 12.53          | 184            | 294         | H        |
| * 4.517         | 35.66                | PKFH | 32.2      | -26.6       | 11.7      | 52.96                      | 74                  | 21.04          | 63             | 322         | H        |
| * 5.422         | 35.49                | PKFH | 34.3      | -26.7       | 12.9      | 55.99                      | 74                  | 18.01          | 10             | 329         | H        |
| * 8.131         | 33.92                | PKFH | 37.1      | -26.2       | 16        | 60.82                      | 74                  | 13.18          | 31             | 320         | H        |
| * 9.035         | 31.83                | PKFH | 37.6      | -25.9       | 16.9      | 60.43                      | 74                  | 13.57          | 16             | 272         | H        |
| * 2.711         | 53.62                | PKFH | 29.3      | -27.1       | 9         | 64.82                      | 74                  | 9.18           | 43             | 156         | V        |
| * 3.615         | 44.68                | PKFH | 31.6      | -26.8       | 10.4      | 59.88                      | 74                  | 14.12          | 349            | 142         | V        |
| * 4.518         | 36.1                 | PKFH | 32.2      | -26.6       | 11.7      | 53.4                       | 74                  | 20.6           | 301            | 114         | V        |
| * 5.421         | 39.43                | PKFH | 34.3      | -26.7       | 12.9      | 59.93                      | 74                  | 14.07          | 242            | 106         | V        |
| * 8.133         | 34.41                | PKFH | 37.1      | -26.2       | 16        | 61.31                      | 74                  | 12.69          | 135            | 103         | V        |
| * 9.035         | 32.42                | PKFH | 37.6      | -25.9       | 16.9      | 61.02                      | 74                  | 12.98          | 21             | 363         | V        |

### PEAK DATA – NON RESTRICTED BAND

| Frequency (GHz) | Meter Reading (dBuV) | Det  | AF [dB/m] | Preamp [dB] | SMA1 [dB] | Corrected Reading (dBuV/m) | Peak Limit [Fundamental-20dBc] (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|------|-----------|-------------|-----------|----------------------------|-----------------------------------------|----------------|----------------|-------------|----------|
| 1.807           | 65.27                | PKFH | 27.1      | -26.9       | 7.3       | 72.77                      | 92.5                                    | 19.73          | 170            | 112         | H        |
| 6.325           | 35.72                | PKFH | 34.9      | -26.4       | 14        | 58.22                      | 92.5                                    | 34.28          | 326            | 292         | H        |
| 7.229           | 33.55                | PKFH | 36.3      | -26.2       | 15        | 58.65                      | 92.5                                    | 33.85          | 108            | 306         | H        |
| 1.807           | 63.55                | PKFH | 27.1      | -26.9       | 7.3       | 71.05                      | 92.5                                    | 21.45          | 143            | 157         | V        |
| 6.325           | 37.95                | PKFH | 34.9      | -26.4       | 14        | 60.45                      | 92.5                                    | 32.05          | 192            | 113         | V        |
| 7.228           | 37.43                | PKFH | 36.3      | -26.2       | 15        | 62.53                      | 92.5                                    | 29.97          | 123            | 104         | V        |

### AVERAGE DATA – RESTRICTED BAND

| Frequency (GHz) | Meter Reading (dBuV) | Det  | AF [dB/m] | Preamp [dB] | SMA1 [dB] | DC Corr [dB] | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|------|-----------|-------------|-----------|--------------|----------------------------|--------------------|-------------|----------------|-------------|----------|
| * 2.711         | 50.88                | VA1T | 29.3      | -27.1       | 9         | -12.53       | 49.55                      | 54                 | 4.45        | 129            | 150         | H        |
| * 3.614         | 43.32                | VA1T | 31.6      | -26.8       | 10.4      | -12.53       | 45.99                      | 54                 | 8.01        | 184            | 294         | H        |
| * 4.518         | 28.55                | VA1T | 32.2      | -26.6       | 11.7      | -12.53       | 33.32                      | 54                 | 20.68       | 63             | 322         | H        |
| * 5.421         | 28.95                | VA1T | 34.3      | -26.7       | 12.9      | -12.53       | 36.92                      | 54                 | 17.08       | 10             | 329         | H        |
| * 8.133         | 26.22                | VA1T | 37.1      | -26.2       | 16        | -12.53       | 40.59                      | 54                 | 13.41       | 31             | 320         | H        |
| * 9.035         | 22.79                | VA1T | 37.6      | -25.9       | 16.9      | -12.53       | 38.86                      | 54                 | 15.14       | 16             | 272         | H        |
| * 2.711         | 51.87                | VA1T | 29.3      | -27.1       | 9         | -12.53       | 50.54                      | 54                 | 3.46        | 43             | 156         | V        |
| * 3.614         | 41.31                | VA1T | 31.6      | -26.8       | 10.4      | -12.53       | 43.98                      | 54                 | 10.02       | 349            | 142         | V        |
| * 4.518         | 29.29                | VA1T | 32.2      | -26.6       | 11.7      | -12.53       | 34.06                      | 54                 | 19.94       | 301            | 114         | V        |
| * 5.421         | 33.42                | VA1T | 34.3      | -26.7       | 12.9      | -12.53       | 41.39                      | 54                 | 12.61       | 242            | 106         | V        |
| * 8.131         | 26.64                | VA1T | 37.1      | -26.2       | 16        | -12.53       | 41.01                      | 54                 | 12.99       | 135            | 103         | V        |
| * 9.035         | 22.2                 | VA1T | 37.6      | -25.9       | 16.9      | -12.53       | 38.27                      | 54                 | 15.73       | 21             | 363         | V        |

Note: \* Indicates Frequency in CFR47 Pt 15 Restricted Band

PKFH – FHSS: RB=1MHz, VB=3x RB, Peak

VA1T-FHSS: Linear Voltage Average RB=1MHzVB=10Hz

Field Strength – dBuV/m = Receiver Readings (dBuV) + Antenna Factor (dB/m) + Cable loss (dB) + Filter Insertion loss – Preamplifier Gain (dB)

Prescans performed in a pre-compliance chamber. Final measurements performed on an OATS

Duty Cycle Correction Factor is calculated using the guidelines provided in DA 00 -705

Duty Cycle Factor =  $20 \times \log(\text{Dwell time} / 100\text{msec})$ , Number of Transmission for 100msec: 8, Dwell time per Transmission: 1.575 msec

Duty Cycle correction Factor =  $20 \log(1.575 \times 8 / 100) = -17.99\text{dB}$

## TEST RESULT – 1 GHz to 10 GHz – CHANNEL 28

## PEAK DATA – RESTRICTED BAND

| Frequency (GHz) | Meter Reading (dBuV) | Det  | AF [dB/m] | Preamp [dB] | SMA1 [dB] | Corrected Reading (dBuV/m) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|------|-----------|-------------|-----------|----------------------------|---------------------|----------------|----------------|-------------|----------|
| * 2.748         | 51.89                | PKFH | 29.4      | -27         | 9         | 63.29                      | 74                  | 10.71          | 103            | 157         | H        |
| * 3.664         | 37.69                | PKFH | 31.8      | -26.9       | 10.4      | 52.99                      | 74                  | 21.01          | 93             | 174         | H        |
| * 4.58          | 34.32                | PKFH | 32.2      | -26.7       | 11.8      | 51.62                      | 74                  | 22.38          | 179            | 390         | H        |
| * 7.327         | 35.75                | PKFH | 36.7      | -26.2       | 15.1      | 61.35                      | 74                  | 12.65          | 40             | 251         | H        |
| * 8.245         | 35.65                | PKFH | 37.1      | -26.1       | 16.2      | 62.85                      | 74                  | 11.15          | 49             | 242         | H        |
| * 9.159         | 31.87                | PKFH | 37.6      | -25.9       | 17        | 60.57                      | 74                  | 13.43          | 319            | 248         | H        |
| * 2.748         | 46.76                | PKFH | 29.4      | -27         | 9         | 58.16                      | 74                  | 15.84          | 29             | 136         | V        |
| * 3.664         | 38.45                | PKFH | 31.8      | -26.9       | 10.4      | 53.75                      | 74                  | 20.25          | 1              | 143         | V        |
| * 4.58          | 38.02                | PKFH | 32.2      | -26.7       | 11.8      | 55.32                      | 74                  | 18.68          | 69             | 112         | V        |
| * 7.327         | 38.24                | PKFH | 36.7      | -26.2       | 15.1      | 63.84                      | 74                  | 10.16          | 35             | 248         | V        |
| * 8.245         | 35.69                | PKFH | 37.1      | -26.1       | 16.2      | 62.89                      | 74                  | 11.11          | 33             | 242         | V        |
| * 9.16          | 33                   | PKFH | 37.6      | -25.9       | 17        | 61.7                       | 74                  | 12.3           | 223            | 211         | V        |

## PEAK DATA – NON RESTRICTED BAND

| Frequency (GHz) | Meter Reading (dBuV) | Det  | AF [dB/m] | Preamp [dB] | SMA1 [dB] | Corrected Reading (dBuV/m) | Peak Limit [Fundamental-20dBc] (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|------|-----------|-------------|-----------|----------------------------|-----------------------------------------|----------------|----------------|-------------|----------|
| 1.832           | 65.2                 | PKFH | 27.3      | -26.9       | 7.3       | 72.9                       | 90.3                                    | 17.4           | 101            | 161         | H        |
| 5.496           | 41.38                | PKFH | 34.4      | -26.6       | 13        | 62.18                      | 90.3                                    | 28.12          | 267            | 318         | H        |
| 6.412           | 41.12                | PKFH | 34.8      | -26.3       | 14.1      | 63.72                      | 90.3                                    | 26.58          | 16             | 267         | H        |
| 1.832           | 52.96                | PKFH | 27.3      | -26.9       | 7.3       | 60.66                      | 90.3                                    | 29.64          | 127            | 386         | V        |
| 5.496           | 39.37                | PKFH | 34.4      | -26.6       | 13        | 60.17                      | 90.3                                    | 30.13          | 270            | 325         | V        |
| 6.413           | 44.67                | PKFH | 34.8      | -26.3       | 14.1      | 67.27                      | 90.3                                    | 23.03          | 273            | 277         | V        |

## AVERAGE DATA – RESTRICTED BAND

| Frequency (GHz) | Meter Reading (dBuV) | Det  | AF [dB/m] | Preamp [dB] | SMA1 [dB] | DC Corr [dB] | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|------|-----------|-------------|-----------|--------------|----------------------------|--------------------|-------------|----------------|-------------|----------|
| * 2.748         | 50.31                | VA1T | 29.4      | -27         | 9         | -12.53       | 49.18                      | 54                 | 4.82        | 103            | 157         | H        |
| * 3.664         | 31.33                | VA1T | 31.8      | -26.9       | 10.4      | -12.53       | 34.1                       | 54                 | 19.9        | 93             | 174         | H        |
| * 4.58          | 25.82                | VA1T | 32.2      | -26.7       | 11.8      | -12.53       | 30.59                      | 54                 | 23.41       | 179            | 390         | H        |
| * 7.328         | 27.09                | VA1T | 36.7      | -26.2       | 15.1      | -12.53       | 40.16                      | 54                 | 13.84       | 40             | 251         | H        |
| * 8.245         | 26.98                | VA1T | 37.1      | -26.1       | 16.2      | -12.53       | 41.65                      | 54                 | 12.35       | 49             | 242         | H        |
| * 9.161         | 22.3                 | VA1T | 37.6      | -25.9       | 17        | -12.53       | 38.47                      | 54                 | 15.53       | 319            | 248         | H        |
| * 2.748         | 44.68                | VA1T | 29.4      | -27         | 9         | -12.53       | 43.55                      | 54                 | 10.45       | 29             | 136         | V        |
| * 3.664         | 33.94                | VA1T | 31.8      | -26.9       | 10.4      | -12.53       | 36.71                      | 54                 | 17.29       | 1              | 143         | V        |
| * 4.58          | 32.18                | VA1T | 32.2      | -26.7       | 11.8      | -12.53       | 36.95                      | 54                 | 17.05       | 69             | 112         | V        |
| * 7.329         | 30.92                | VA1T | 36.7      | -26.2       | 15.1      | -12.53       | 43.99                      | 54                 | 10.01       | 35             | 248         | V        |
| * 8.245         | 27.74                | VA1T | 37.1      | -26.1       | 16.2      | -12.53       | 42.41                      | 54                 | 11.59       | 33             | 242         | V        |
| * 9.161         | 22.93                | VA1T | 37.6      | -25.9       | 17        | -12.53       | 39.1                       | 54                 | 14.9        | 223            | 211         | V        |

Note: \* Indicates Frequency in CFR47 Pt 15 Restricted Band

PKFH – FHSS: RB=1MHz, VB=3x RB, Peak

VA1T-FHSS: Linear Voltage Average RB=1MHz/VB=10Hz

Field Strength – dBuV/m = Receiver Readings (dBuV) + Antenna Factor (dB/m) + Cable loss (dB) + Filter Insertion loss – Pre-amplifier Gain (dB)

Prescans performed in a pre-compliance chamber. Final measurements performed on an OATS

Duty Cycle Correction Factor is calculated using the guidelines provided in DA 00 -705

Duty Cycle Factor =  $20 \cdot \log(\text{Dwell time} / 100\text{msec})$ , Number of Transmission for 100msec: 8, Dwell time per Transmission: 1.575 msec

Duty Cycle correction Factor =  $20 \log(1.575 \cdot 8 / 100) = -17.99\text{dB}$

## TEST RESULT – 1 GHz to 10 GHz – CHANNEL 55

## PEAK DATA – RESTRICTED BAND

| Frequency (GHz) | Meter Reading (dBuV) | Det  | AF [dB/m] | Preamp [dB] | SMA1 [dB] | Corrected Reading (dBuV/m) | Peak Limit (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|------|-----------|-------------|-----------|----------------------------|---------------------|----------------|----------------|-------------|----------|
| * 2.779         | 55.47                | PKFH | 29.5      | -27.1       | 9.1       | 66.97                      | 74                  | 7.03           | 103            | 141         | H        |
| * 3.706         | 38.71                | PKFH | 32        | -26.9       | 10.6      | 54.41                      | 74                  | 19.59          | 85             | 170         | H        |
| * 4.632         | 34.41                | PKFH | 32.4      | -26.6       | 11.8      | 52.01                      | 74                  | 21.99          | 190            | 277         | H        |
| * 7.411         | 33.97                | PKFH | 36.8      | -26.2       | 15.2      | 59.77                      | 74                  | 14.23          | 21             | 265         | H        |
| * 8.338         | 35.79                | PKFH | 37.3      | -26.1       | 16.2      | 63.19                      | 74                  | 10.81          | 282            | 264         | H        |
| * 2.779         | 52.42                | PKFH | 29.5      | -27.1       | 9.1       | 63.92                      | 74                  | 10.08          | 32             | 159         | V        |
| * 3.706         | 41.15                | PKFH | 32        | -26.9       | 10.6      | 56.85                      | 74                  | 17.15          | 15             | 145         | V        |
| * 4.632         | 33.97                | PKFH | 32.3      | -26.6       | 11.8      | 51.47                      | 74                  | 22.53          | 194            | 238         | V        |
| * 7.412         | 35.1                 | PKFH | 36.8      | -26.2       | 15.2      | 60.9                       | 74                  | 13.1           | 47             | 272         | V        |
| * 8.337         | 34.16                | PKFH | 37.3      | -26.1       | 16.2      | 61.56                      | 74                  | 12.44          | 64             | 253         | V        |

## PEAK DATA – NON RESTRICTED BAND

| Frequency (GHz) | Meter Reading (dBuV) | Det  | AF [dB/m] | Preamp [dB] | SMA1 [dB] | Corrected Reading (dBuV/m) | Peak Limit [Fundamental-20dBc] (dBuV/m) | PK Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|------|-----------|-------------|-----------|----------------------------|-----------------------------------------|----------------|----------------|-------------|----------|
| 1.853           | 70.66                | PKFH | 27.5      | -26.9       | 7.4       | 78.66                      | 94.9                                    | 16.24          | 336            | 233         | H        |
| 5.559           | 40.75                | PKFH | 34.4      | -26.4       | 13.1      | 61.85                      | 94.9                                    | 33.05          | 277            | 293         | H        |
| 6.486           | 41.38                | PKFH | 34.8      | -26.4       | 14.2      | 63.98                      | 94.9                                    | 30.92          | 21             | 265         | H        |
| 9.268           | 34.09                | PKFH | 37.8      | -26         | 17.1      | 62.99                      | 94.9                                    | 31.91          | 324            | 156         | H        |
| 1.853           | 75.1                 | PKFH | 27.5      | -26.9       | 7.4       | 83.1                       | 94.9                                    | 11.8           | 186            | 354         | V        |
| 5.558           | 37.75                | PKFH | 34.4      | -26.4       | 13.1      | 58.85                      | 94.9                                    | 36.05          | 41             | 275         | V        |
| 6.486           | 43.78                | PKFH | 34.8      | -26.4       | 14.2      | 66.38                      | 94.9                                    | 28.52          | 8              | 261         | V        |
| 9.263           | 30.8                 | PKFH | 37.8      | -26         | 17.1      | 59.7                       | 94.9                                    | 35.2           | 127            | 280         | V        |

## AVERAGE DATA – RESTRICTED BAND

| Frequency (GHz) | Meter Reading (dBuV) | Det  | AF [dB/m] | Preamp [dB] | SMA1 [dB] | DC Corr [dB] | Corrected Reading (dBuV/m) | Avg Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) | Height (cm) | Polarity |
|-----------------|----------------------|------|-----------|-------------|-----------|--------------|----------------------------|--------------------|-------------|----------------|-------------|----------|
| * 2.779         | 53.24                | VA1T | 29.5      | -27.1       | 9.1       | -12.53       | 52.21                      | 54                 | 1.79        | 103            | 141         | H        |
| * 3.706         | 33.9                 | VA1T | 32        | -26.9       | 10.6      | -12.53       | 37.07                      | 54                 | 16.93       | 85             | 170         | H        |
| * 4.632         | 26.36                | VA1T | 32.3      | -26.6       | 11.8      | -12.53       | 31.33                      | 54                 | 22.67       | 190            | 277         | H        |
| * 7.411         | 23.1                 | VA1T | 36.8      | -26.2       | 15.2      | -12.53       | 36.37                      | 54                 | 17.63       | 21             | 265         | H        |
| * 8.339         | 26.59                | VA1T | 37.3      | -26.1       | 16.2      | -12.53       | 41.46                      | 54                 | 12.54       | 282            | 264         | H        |
| * 2.779         | 50.98                | VA1T | 29.5      | -27.1       | 9.1       | -12.53       | 49.95                      | 54                 | 4.05        | 32             | 159         | V        |
| * 3.706         | 37.61                | VA1T | 32        | -26.9       | 10.6      | -12.53       | 40.78                      | 54                 | 13.22       | 15             | 145         | V        |
| * 4.632         | 25.49                | VA1T | 32.4      | -26.6       | 11.8      | -12.53       | 30.56                      | 54                 | 23.44       | 194            | 238         | V        |
| * 7.411         | 26.12                | VA1T | 36.8      | -26.2       | 15.2      | -12.53       | 39.39                      | 54                 | 14.61       | 47             | 272         | V        |
| * 8.339         | 26.73                | VA1T | 37.3      | -26.1       | 16.2      | -12.53       | 41.6                       | 54                 | 12.4        | 64             | 253         | V        |

Note: \* Indicates Frequency in CFR47 Pt 15 Restricted Band  
 PKFH –FHSS: RB=1MHz ,VB=3x RB ,Peak  
 VA1T-FHSS: Linear Voltage Average RB=1MHzVB=10Hz

Field Strength –dBuV/m = Receiver Readings (dBuV) + Antenna Factor (dB/m) + Cable loss (dB) + Filter Insertion loss – Preamplifier Gain (dB)

Prescans performed in a pre-compliance chamber. Final measurements performed on an OATS

Duty Cycle Correction Factor is calculated using the guidelines provided in DA 00 -705

Duty Cycle Factor =20\*log (Dwell time /100msec), Number of Transmission for 100msec: 8, Dwell time per Transmission: 1.575 msec  
 Duty Cycle correction Factor =20 log (1.575\*8/100) = -17.99dB